

Operating Instructions

8mm VIDEO CASSETTE MOVIE

VE-M800 /HEZ /HB

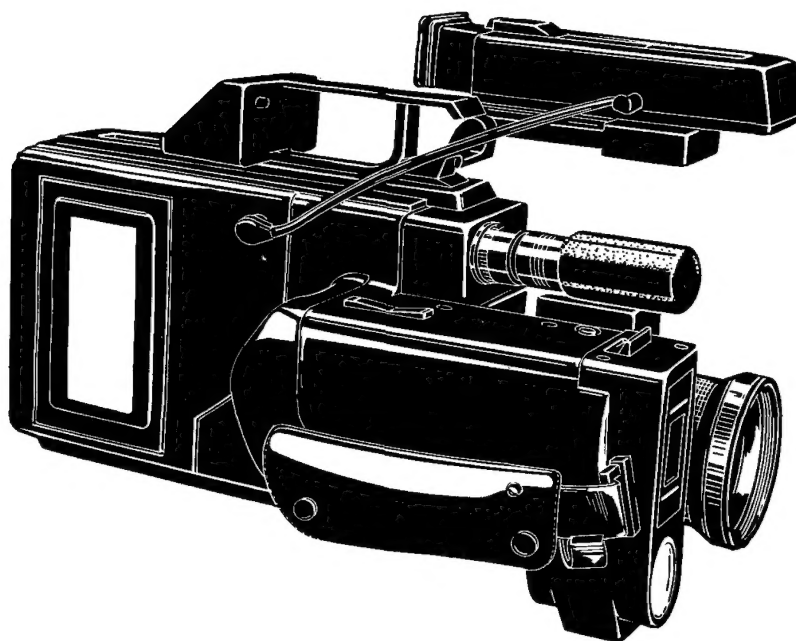
PAL

Thank you for buying this Pioneer product.
Please read these operating instructions thoroughly, so
you will know how to operate your model properly. After
you have finished reading the instructions, put them
away in a safe place for future reference.

HEZ model: for Europe without U.K.

HB model: for U.K.

The model names are stamped on the packing case.



 **PIONEER®**

"movie" in the following sentence means "8mm video cassette movie".

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

Please refer to the illustration corresponding to the letter code indicated in the instructions.

NOTES

- For "once-only" events, it is strongly recommended to have a trial run to check that everything is working perfectly.
- Television programmes, films, video tapes and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws.
- For using the movie abroad, see page 38.

This unit uses 8mm video format cassettes. It records in the SP mode (approximately 20.051mm/second) and the LP mode (approximately 10.058mm/second) and can play back in the SP mode and the LP mode.

For camera recording, remove the camera head cover, and for recording of a TV programme, replace it. **A**

A

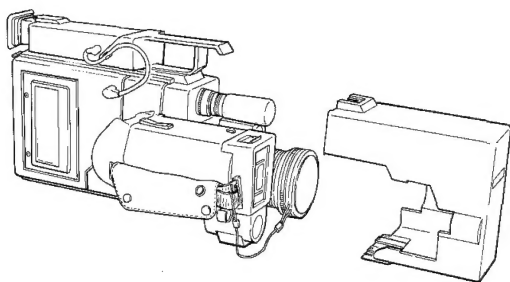


TABLE OF CONTENTS

Location and function of parts and controls	4
Power sources	7
Selection of power sources	7
Battery pack	8
AC pack	9
Three modes of operation	10
Cassette care	12
Cassette insertion	12
Cassette ejection	12
The tab on the cassette	12

CAMERA OPERATION

Camera recording	13
How to hold the camera	13
Shooting on your shoulder	14
Recording	16
Smooth recording	17
Instant replay on the spot	18
Monitoring the playback picture on the viewfinder screen	18
Auto focusing	19
Manual focusing	20
White balance	21
Zooming	22
Iris adjustment	22
Use of the microphone	23
Attachment of the video light	24

RECORDER OPERATION

Playback of the recorded tape	25
Connection	25
Operation	28
Different forms of playback	28
Use of the tape counter	29
To index the whole tape	29
To return to a pre-registered point	29
TV programme recording	30
Editing	35
Insert recording	36
Preparation	36
Operation	36

GENERAL

Notes on moisture condensation	37
Precautions	38
Using your movie abroad	38
Specifications	39
Troubleshooting	40
Trouble indicators	41
Check list before recording	back cover

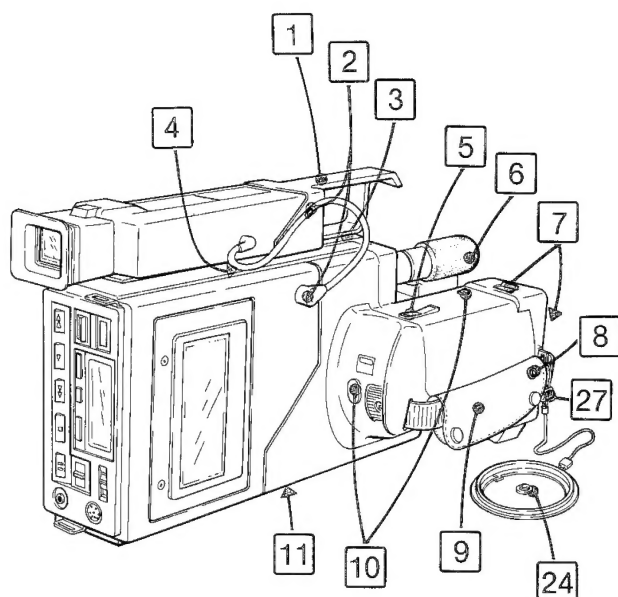
HINTS FOR BETTER SHOOTING page 42

B-1

LOCATION AND FUNCTION OF PARTS AND CONTROLS

B-1

For details on the use of each control, refer to the pages indicated in the brackets.



1 Handle

2 VIEWFINDER jack and Cable clamp

Connect the plug of the viewfinder cable, and clamp the cable without touching the cassette holder.

3 Accessory shoe [p.14]

Attach an optional external microphone or video light (up to 500 g, 1 lb), handle, viewfinder, EVF adaptor.

4 (brightness) control screw (blue screw on the bottom of the viewfinder)

Turn with a Philips screwdriver to adjust the brightness of the viewfinder screen, if necessary.

5 Power zoom button [p.22]

Press for smooth power zooming between wide-angle (W) and telephoto (T) positions.

6 Microphone [p.23]

Sound is recorded simultaneously while shooting.

7 BATTERY compartment and battery ejector [p.9]

Insert a VX-A101 battery pack, or an AP-A108 with the metal terminals facing the unit. To remove the battery pack, ac pack, push the bottom of the pack and at the same time slide the ejector in the direction of the arrow. The pack will then slide out.

8 Lens cap hook

Snap the lens cap here when it is not in use.

9 Grip strap [p.13]

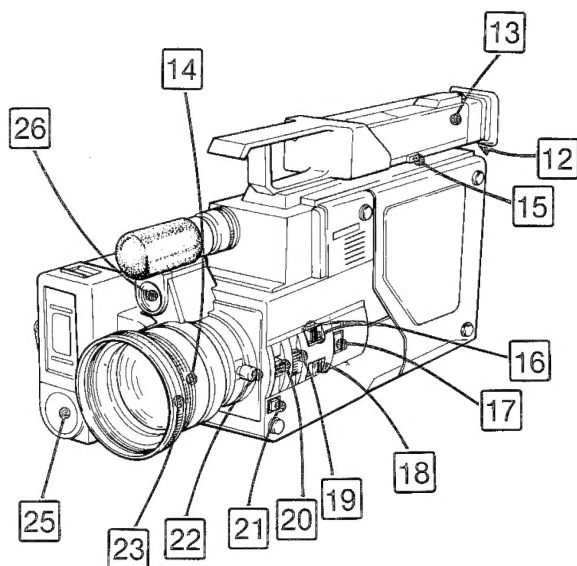
Adjust this so that your fingertips can easily manipulate the START/STOP button.

10 START/STOP button [p.17]

Press to start or stop camera recording.

11 Tripod receptacle

Attach an optional tripod.

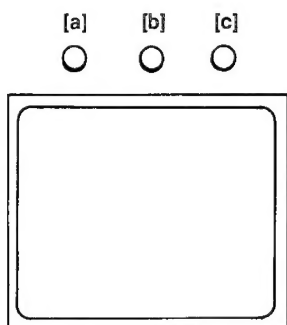


12 Viewfinder lens adjustment lever [p.16]

Adjust to your eyesight to assure good focus. Be sure to adjust when shooting for the first time or after another person has used the camera.




[13] Electric viewfinder

The lamps inside the viewfinder light or blink during camera recording.



[a] **Low light lamp (yellow):** Lights when the light is insufficient.

[b] **Tape run/battery lamp (red):** Functions when the camera section is turned on. Lights steadily during recording. Blinks when the inserted battery is exhausted, when the tape comes to an end, or when the tab on the inserted cassette is set to prevent erasure of a recording.

[c] **White balance lamp (orange):** Functions when the low light lamp is not lit. Lights steadily when the WHITE BALANCE switch is set to  or . Blinks when the white balance is not adjusted. Goes out when the WHITE BALANCE switch is set to , and the white balance has been adjusted.

[14] Focus ring [p.20]

When manually focusing by setting the FOCUS switch to "MAN", turn the ring to focus while looking through the viewfinder.

[15] EVF release button

Press this button when you release the viewfinder.

[16] CAMERA POWER switch and lamp [p.10]

Slide to the right to turn on the camera section. The lamp lights up.

To turn off the camera section, slide again and the lamp goes off.

When a VX-TU70 tuner timer unit is connected, this switch does not function.

[17]  REC REVIEW button [p.18]

Press when the unit is set in the CAMERA mode or VCR-CAMERA mode, and then is set in the pause mode during recording, to review the last few seconds of the recorded picture.

[18] Aperture switch [p.22]


The amount of light entering the camera is determined by this switch.


NORM: Normally set to this position.


BACK LIGHT: Set to this position when the subject is back lit.


HIGH LIGHT: Set to this position when the subject is too brightly lit against the background.

[19] WHITE BALANCE switch [p.21]

To adjust white balance, slide the switch all the way down and return it to the automatic position () , or set it to the proper position according to the prevailing light conditions.

 : Sunlight (outdoors)

 : Artificial light (indoors)

 : Automatically adjusted

[20] FOCUS switch [p.20]

Set to AUTO for the automatic focusing function of this movie to activate. Set to MAN (manual), when you desire to focus manually.

[21] PUSH AUTO button [p.20]

Even while the FOCUS switch is set to "MAN" for manual focusing, you can activate the automatic focusing function by keeping this button depressed.

[22] Manual zoom lever [p.20]

Turn the zoom lever for manual zooming between the wide-angle and telephoto positions.

[23] Lens hood

Usually attached to the lens ring. Remove when attaching other optional lenses.

[24] White lens cap [p.16]

[25] Infrared beam emitter

Transmits an infrared beam toward the object to be shot for auto focusing.

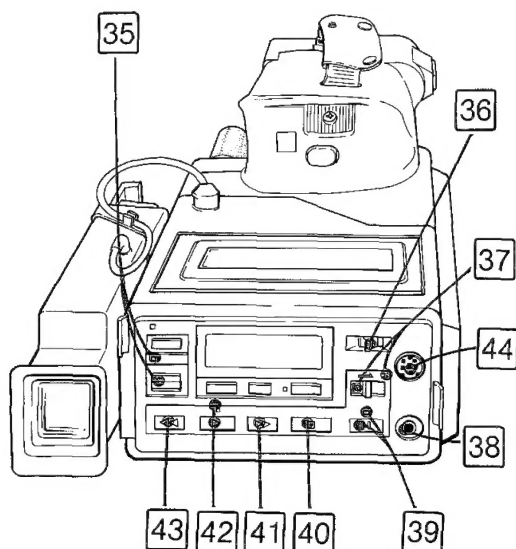
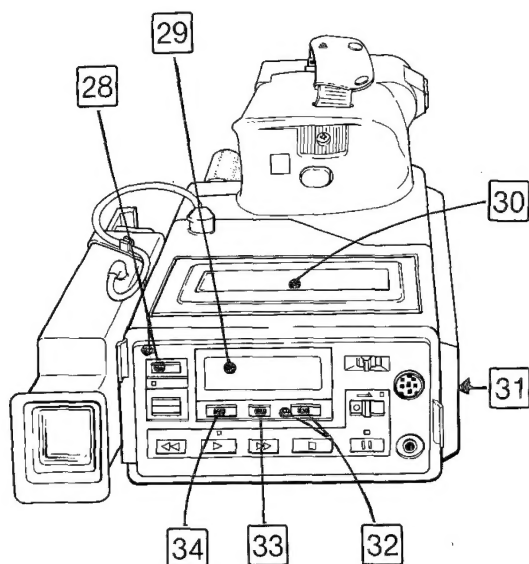
[26] Infrared beam detector

The infrared beam transmitted by the infrared beam emitter and then reflected from the object to be shot is received here for the auto focusing of the movie to function.

[27] Cord holder

Hook the cord of the AP-A108 ac pack so that the cord does not pass infrared beam emitter.

B-2

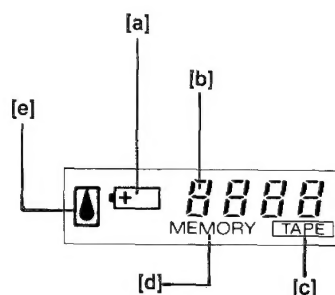


B-2

28 VCR POWER switch and lamp [p.10]

Press to turn on the recorder section. The lamp lights up. Press again to turn it off. When VX-TU70 tuner timer unit is connected, use the power switch of the connected unit as this switch does not function.

29 Display window



[a] Blinks when the inserted battery is exhausted.

[b] The counter changes as the tape moves.

[c] Blinks when the movie is in the CAMERA mode and no cassette is inserted, the movie is in the CAMERA mode and the tab on the cassette is out, or the tape comes to an end during recording.

[d] Indicates that the MEMORY function is activated.

[e] Blinks when the moisture has condensed inside the unit.

30 Cassette holder

31 MULTI CONNECTOR [p.25]

Connect to an RF-A108 RFU adaptor or a VX-TU70 tuner timer unit. To open the lid, slide it in the direction of the arrow.

32 INSERT button and lamp [p.36]

Press to insert a recording onto a previously-recorded tape when the movie is set in the playback pause mode. The lamp lights during operation.

33 MEMORY button [p.29, p.36]

To return the tape to the "0000" point, press this button and the MEMORY mark appears. Then press the ◀◀ or ▶▶ button. On insert recording, the recording stops automatically at the "0000" point.

34 RESET button [p.29]

Press to reset the counter to "0000".

[35] EJECT button and lamp [p.12]

On cassette insertion or ejection, slide down this button after turning on the unit and the cassette compartment will pop up.

[36] REC MODE/EDIT switch

During recording, this switch functions as the recording tape speed SP/LP selector.

The recording time of a cassette in the LP mode is 2 times that in the SP mode.

During playback, normally keep this switch in the left "NORM", position. Only when playing back a tape for the purpose of recording the playback with another recorder, set this switch to the right "EDIT" position.

[37] ● (record) switch and lamp [p.10, p.11]

Slide to the right to start recording when only the recorder section is turned on. The lamp lights. When the CAMERA POWER switch is turned on after turning on the recorder section, the movie is set in the recording pause mode. To start recording, press the **II** or START/STOP button. When only the camera section is turned on, this switch does not function.

[38] EARPHONE jack (mini type) [p.18]

Connect an earphone to monitor the sound being recorded during camera or insert recording, or the playback sound while viewing the playback picture in the viewfinder.

The cord of the earphone should be less than 1,5 m (59 1/8 in) for hearing.

[39] II (pause) button and lamp

Press to stop the tape for a moment during recording or playback. The lamp lights. During playback of a recorded tape, a still picture is obtained. Press again to release the pause mode.

[40] ■ (stop) button

Press to stop the tape.

[41] ►► (fast forward) button

Press to advance the tape. Pressing this button during playback lets you see a high-speed playback.

[42] ► (play) button and lamp

Press to play back a tape.

[43] ◀◀ (rewind) button

Press to wind the tape back. Pressing this button during playback lets you see a high-speed playback in reverse.

[44] REMOTE connector

POWER SOURCES

SELECTION OF POWER SOURCES

Operate the unit on one of the following power sources. This manual shows the operations on the battery pack, the ac pack. For operation on other power sources, see the instruction manual furnished with the equipment to be used.

Place	Power source	Accessory to be used
Indoors	House current	AC pack AP-A108 page 9
		Tuner timer unit VX-TU70
Outdoors	Battery pack	Battery pack VX-A101 page 8

When the VX-TU70 is connected

The following operations are possible.

- Power supply for the VE-M800
- Battery charge
- Playback of a tape
- TV programme recording
- Timer recording
- Tape editing

For details on connections and operations, please read the instruction manual furnished with the VX-TU70.

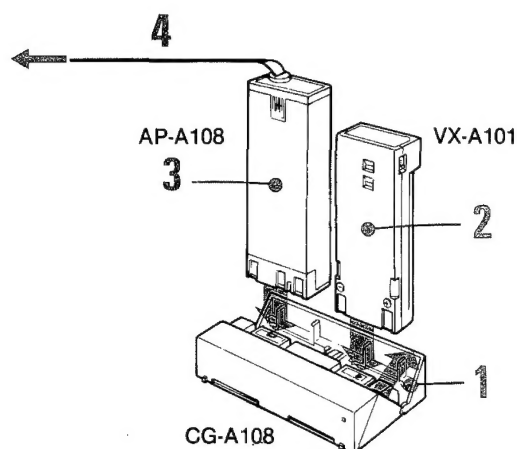
BATTERY PACK

How to charge

Use the AP-A108 ac pack and the CG-A108 battery charge adaptor to charge the battery.

The AP-A108/HEZ is for use in 220 V ac areas and the AP-A108/HB for 240 V ac areas.

C-1



Rapid charging **C-1**

The charging time is about 1.5 hours for one battery only.

- 1 Open the side with Δ OPEN mark of the CG-A108 battery charge adaptor.
- 2 Insert the battery with the metal contacts facing the inside.
- 3 Insert the ac pack into the battery charge adaptor with the metal contacts facing the inside.
- 4 Connect the mains lead of the ac pack to the mains outlet.

When the battery is fully charged, the charging will stop automatically and the CHARGE lamp of the battery charge adaptor will go out.

Normal charging

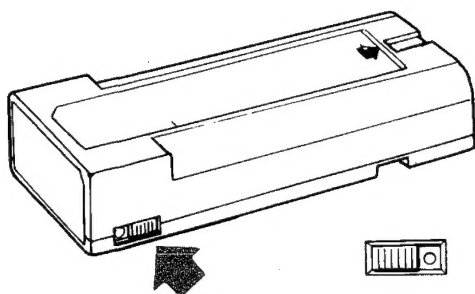
It takes about 8 hours to charge up to 3 batteries simultaneously. Slide the RELEASE switch of the CG-A108 in the direction of the arrow to open the other side and insert 1 to 3 batteries.

When the batteries are fully charged, the charging will stop automatically and the CHARGE lamp of the battery charge adaptor will go out.

Battery life

At normal temperatures, a fully-charged battery provides approximately 1 hour of continuous operation.

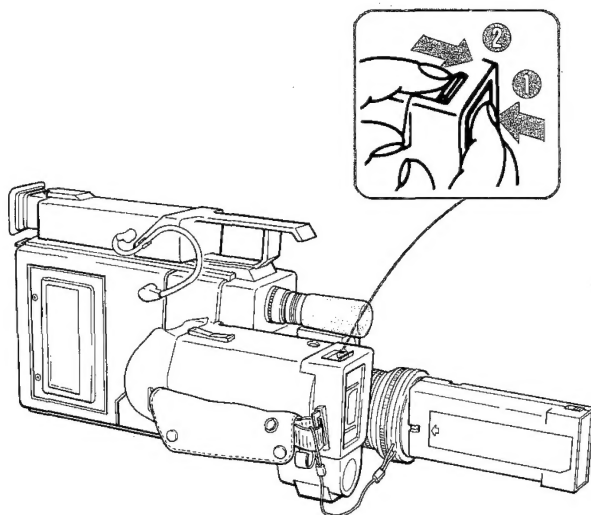
C-2



Note

- The 8mm video cassette movie consumes power even in the recording pause mode and normal recording on a 1-hour cassette actually requires a few batteries fully-charged.
- If the battery pack is not fully charged or if it is used in a cold place, its operating time is also shortened.

When the battery has been fully charged, set the charge condition indicator on the VX-A101 rechargeable battery pack so that the black mark appears. **C-2**



To insert and remove the battery pack **C-3**

Insert the battery into the battery compartment with the metal contacts facing the inside. To remove the battery pack, push the bottom of the battery pack and hold it. At the same time slide the ejector in the direction of the arrow and slide the battery pack out.

AFTER EACH USE, BE SURE TO RECHARGE THE BATTERY PACK.

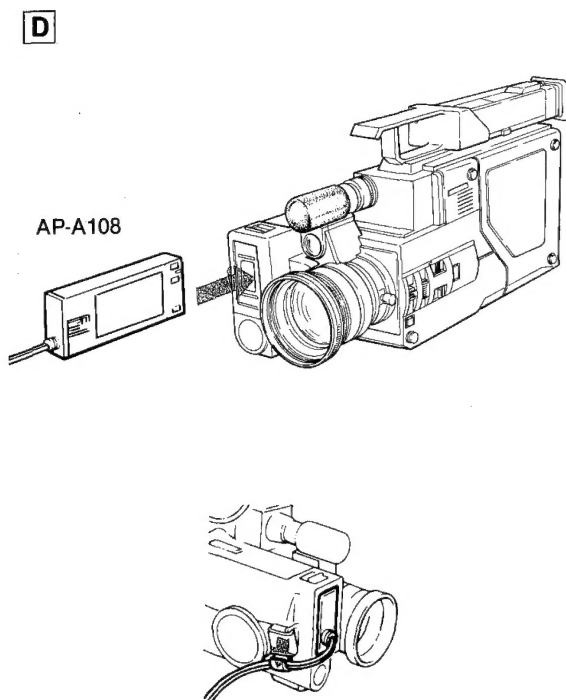
AC PACK

Connection **D**

- 1 Insert the AP-A108 ac pack into the battery compartment with the metal contacts facing the inside.
- 2 Connect the mains lead of the ac pack to the mains outlet.
Hook the cord on the cord holder so that the cord does not pass the infrared beam emitter.

Note on power source







Disconnecting the power source or removing the battery/ac pack during recording or playback may damage the inserted cassette tape. If this is done by accident, supply the power again immediately and turn on the power switch.



THREE MODES OF OPERATION

The VE-M800 8mm video cassette movie is equipped with two power switches, the CAMERA POWER switch and VCR POWER switch. Press either or both of these switches according to the operating modes below.

Modes and their uses

Operating mode	Power switch to press	Power lamp that lights up	Operable buttons	Power switch to turn off
CAMERA mode Useful for camera recording. (The buttons irrelevant for recording will not work when pressed.)	CAMERA POWER switch	CAMERA POWER lamp	VCR POWER REC MODE/EDIT START/STOP REC REVIEW Power zoom WHITE BALANCE Aperture EJECT RESET MEMORY	CAMERA POWER switch
VCR mode Useful for playback or TV programme recording. The camera section's power is saved.	VCR POWER switch	VCR POWER lamp	REC MODE/EDIT EJECT       RESET MEMORY INSERT CAMERA POWER	VCR POWER switch
VCR-CAMERA mode Useful for playback during camera recording or insert camera recording.	VCR POWER switch and CAMERA POWER switch	CAMERA POWER lamp and VCR POWER lamp	all buttons	VCR POWER switch or CAMERA POWER switch

When a VX-TU70 tuner timer unit is connected

The VCR POWER switch and the CAMERA POWER switch of the 8mm video cassette movie will not work. To turn the 8mm video cassette movie on or off, use the ON/STANDBY switch of the VX-TU70 tuner timer unit.

● **To set this 8mm video cassette movie to the VCR mode,**

set the INPUT SELECTOR switch of the VX-TU70 to TUNER for recording TV programmes or to LINE for recording input signals from the EURO CONNECTOR of the VX-TU70.

● **To set this 8mm video cassette movie to the VCR-CAMERA mode,**

set the INPUT SELECTOR switch of the VX-TU70 to CAMERA.

The 8mm video cassette movie cannot be set in the CAMERA (only) mode with the tuner timer unit connected.

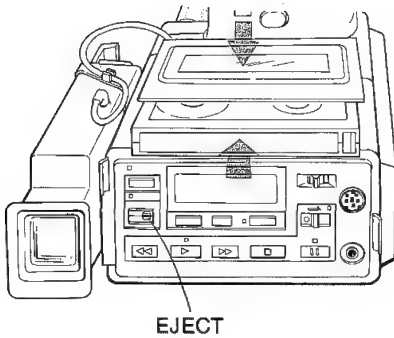
Recording operation of each mode

Operating mode	How to record
CAMERA mode	When the CAMERA POWER switch is turned on, this unit is automatically set in the recording pause mode. Press the START/STOP button to start recording.
VCR mode	Slide the ● switch to start recording.
VCR-CAMERA mode	When the ● switch is slid or when the CAMERA POWER switch is turned on after turning on the VCR POWER switch, this unit is set in the recording pause mode. Press the ■■ or START/STOP button to start recording. (When a cassette is inserted, this unit is automatically set in the recording pause mode.)

CASSETTE CARE

Always insert a cassette in the correct direction. Never insert it upside down.

E-1



CASSETTE INSERTION **E-1**

- 1 Turn on the power. (See page 10. Any operating mode is usable.)
- 2 Press the EJECT button and the cassette compartment will pop up.
- 3 Insert a cassette with the window upwards and the arrow mark in front.
- 4 Push down the cassette compartment.

CASSETTE EJECTION

- 1 Turn on the power.
- 2 Press the EJECT button.
- 3 Take the cassette out and push down the cassette compartment.

THE TAB ON THE CASSETTE **E-2**

When a new recording is made on a previously recorded cassette, the previous recording will be automatically erased. To avoid erasing a recording, slide the tab out to cover the opening.

When the tab is out, a recording cannot be made. To re-record on a cassette, slide the tab in.

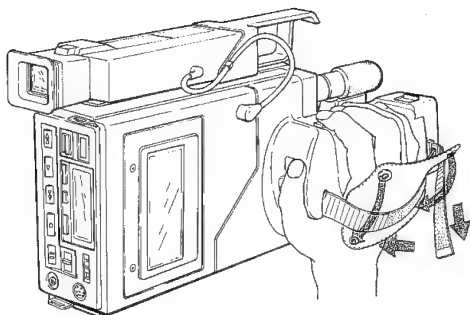
Note

Never insert anything in the small holes on the rear of the cassette. These holes are used to sense the kind of tape, thickness of tape, if the tab is out or in, etc.

E-2



F-1



CAMERA OPERATION

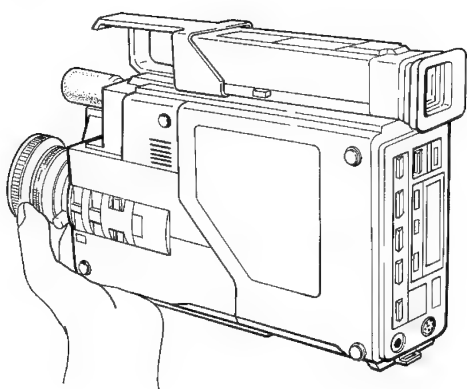
CAMERA RECORDING

HOW TO HOLD THE CAMERA

Adjusting the grip strap **F-1**

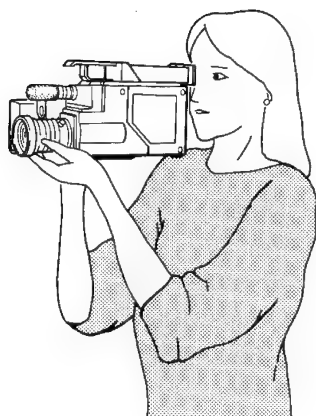
- 1 Position your right hand so that your fingertips can easily manipulate the START/STOP button and the power zoom button.
- 2 Open the cover and adjust the strap so that your grip on the camera feels secure.
- 3 Close the cover.

F-2



Place your right hand through the grip strap and your left hand under the 8mm video cassette movie to support it. **F-2**

For stable shooting, hold the upper arm firmly against the body.



SHOOTING ON YOUR SHOULDER

Attach the supplied EVF adaptor to the accessory shoe.

F-3

① Hold down the EVF release button and slide off the viewfinder.

② Push upward on the gray tab and remove the handle.

F-4

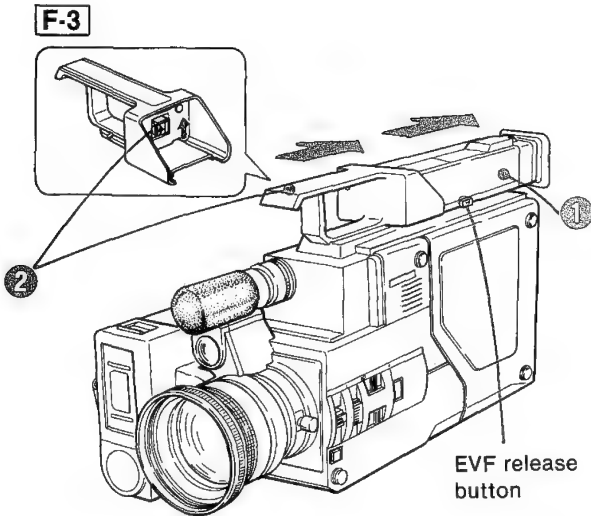
③ Attach the EVF adaptor.

F-5

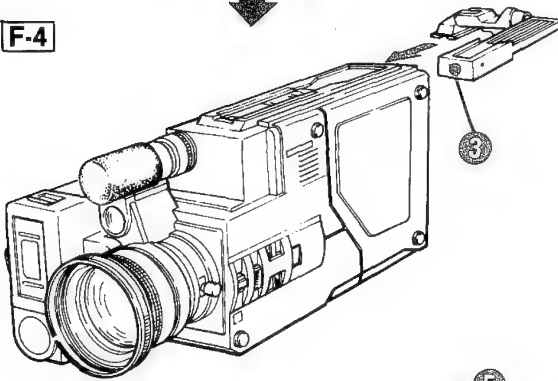
④ Install the handle. Slide it forward until it clicks into place. Confirm that it is securely locked into place.

⑤ Attach the viewfinder to the EVF adaptor.

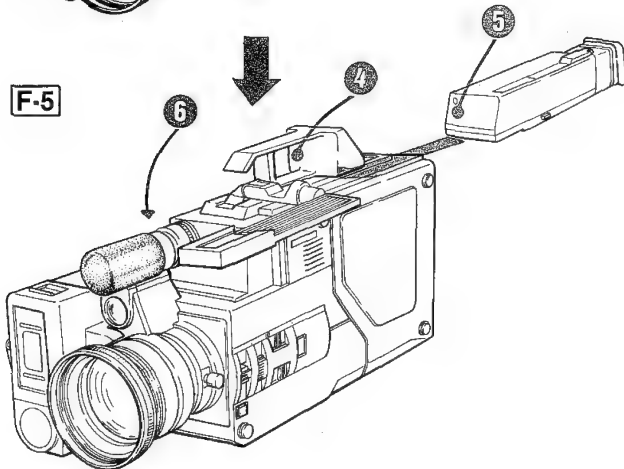
⑥ Connect the viewfinder to the viewfinder terminal.



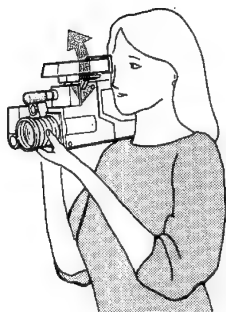
F-4



F-5



F-6



CORRECT BODY POSITION WHEN SHOOTING WITH THE CAMERA ON YOUR SHOULDER F-6

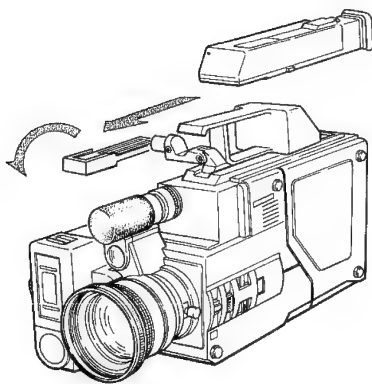
Adjust the angle of the viewfinder for the most comfortable a natural viewing position.

To ensure a stable image when shooting, hold the upper arm firmly against the body.

Notice

The EVF adaptor is designed for use with the viewfinder only. Do not use it for attaching a microphone or spotlight.

F-7



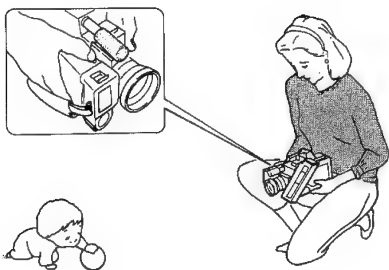
SIGHTING WITH THE LEFT EYE F-7

Attach the EVF adaptor on the opposite side. Rotate 180 degrees and then attach the viewfinder.

When shooting from a low angle F-8

Turn the viewfinder upward so that you can look into it from above. When shooting, use the START/STOP button on the upper surface of the grip.

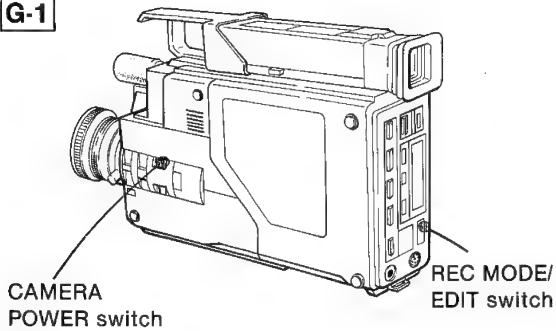
F-8



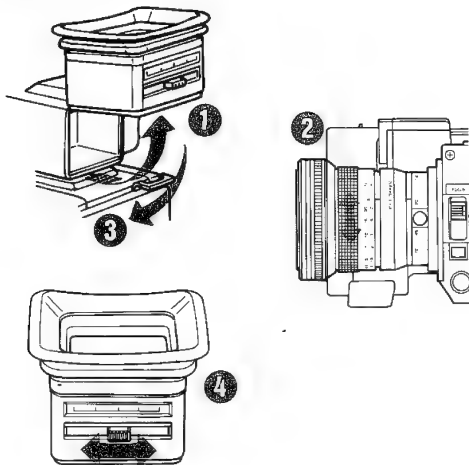
RECORDING

The VX-A101 battery pack is used as the power source.

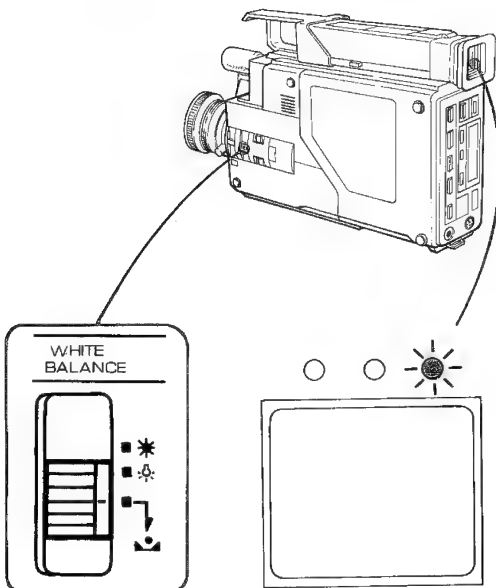
G-1



G-2



G-3



- 1 Set the **REC MODE/EDIT switch** to the desired position according to the length of the programme to be recorded. **G-1**

The recording time of a cassette in the LP mode is twice as long as that in the SP mode.

- 2 Slide the **CAMERA POWER switch** to turn on the power (CAMERA mode) and insert the cassette into the cassette holder. **G-1**

The CAMERA POWER lamp lights up. The 8mm video cassette movie enters the recording pause mode and the recording and pause lamps light up.

- 3 Adjust the viewfinder lens. **G-2**

The distance of optimum vision varies from person to person.

Viewfinder lens adjustment is necessary when using the camera for the first time or after another person has used it.

- ① Lift up the viewfinder lens.
- ② Focus with the focus ring while observing the viewfinder screen.
- ③ Replace the viewfinder lens.
- ④ Slide the viewfinder slightly while pushing the EVF release button and set the viewfinder lens adjustment lever so that the subject in the viewfinder is in focus.
- ⑤ Set the viewfinder to the right position.

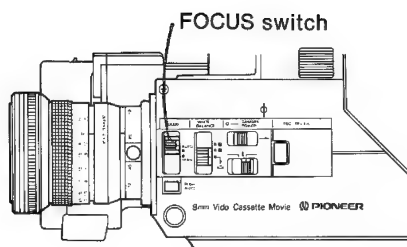
- 4 Adjust the white balance (automatic adjustment). **G-3**

With the white cap on the lens, point the camera at a light source (indoors) or a subject (outdoors) from a distance of at least two meters. Slide the **WHITE BALANCE switch** all the way down to ; the white balance switch will immediately return to the position. The white balance is now adjusted.

After white balance has been adjusted, the white balance lamp in the viewfinder goes out.

For details on white balance, see the "WHITE BALANCE" on page 21.

G-4



5 Select the subject to be recorded through the viewfinder.

6 Set FOCUS switch to AUTO. G-4

7 Press the START/STOP button to start recording. G-5

The red lamp in the viewfinder lights up.

To stop recording, press the START/STOP button again.

The red lamp in the viewfinder goes out and the 8mm video cassette movie enters the recording pause mode.

- If you leave the movie in the pause mode for seven minutes or more, the power of the movie will be automatically turned off.

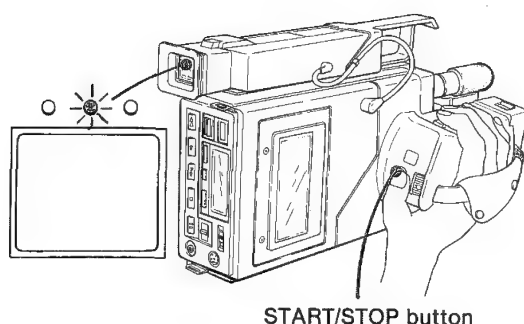
- A vertical band may appear when a subject such as a candle flame or a light is shot against a dark background.

After using the 8mm video cassette movie, slide the CAMERA POWER switch again. The CAMERA POWER lamp goes out.

Note

Never record an extremely bright object just after recording under dark conditions; otherwise vertical streaks may appear in the picture and be recorded as well.

G-5



SMOOTH RECORDING


Smooth recording can be made even if the recording is stopped and started again, or even if the power is turned off and on again, provided that the cassette is not removed.

Recording should be started from the recording pause mode. If the cassette has been removed, proceed as follows.

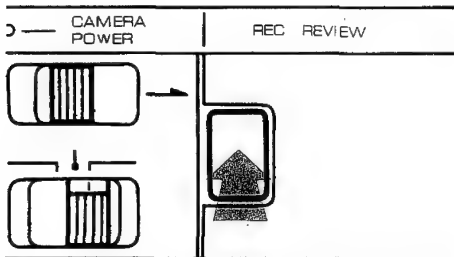
- 1** Set the movie to the VCR-CAMERA mode.
- 2** Play back the tape to get the point from which the recording is to begin again, referring to the "MONITORING THE PLAYBACK PICTURE ON THE VIEWFINDER SCREEN" on page 18 and stop the tape with the **II** button.
- 3** Slide the ● (record) switch to the right and press the START/STOP button or **II** button to start recording.

INSTANT REPLAY ON THE SPOT (Record review)

When the movie is set in the CAMERA mode or VCR-CAMERA mode, and then is set in the recording pause mode, the last few seconds of the recording can be played back on the viewfinder screen.

- 1 When the scene you want to record is finished, press the START/STOP button to stop the tape.
- 2 Press the  REC REVIEW button. **H-1**
The last few seconds of the recorded scene are played back in reverse, and then played back normally.
After playing back the tape up to the end of the recorded portion, the movie enters the recording pause mode.
- 3 To restart recording, press the START/STOP button.

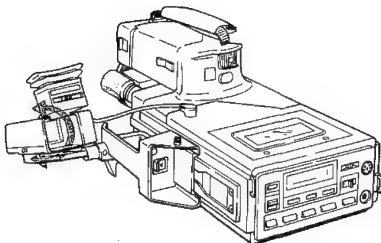
H-1



MONITORING THE PLAYBACK PICTURE ON THE VIEWFINDER SCREEN

If the movie is in the CAMERA mode, turn the VCR POWER switch on. Lift up the viewfinder lens to monitor the recorded picture on the viewfinder screen, and rewind and play back the tape. To monitor the playback sound, connect an earphone to the EARPHONE jack. **H-2**

H-2



AUTO FOCUSING

This 8mm video cassette movie focuses by transmitting an infrared beam toward the subject and receiving the reflected beam with an infrared beam detector.

For almost any subject centered in the viewfinder, auto focusing will activate. However, for some subjects listed below, auto focusing does not work correctly and manual focusing is required.

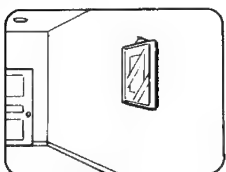
Objects for which the auto focusing does not activate

● Black objects which absorb the infrared beam



Ex. dark curtain, hair or shade.

● Objects in which the infrared reflection disperses



Ex. a smooth surface aimed at from an angle. Auto focusing activates if it is aimed at squarely.

● Objects in which the infrared reflection is not sufficient



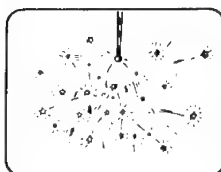
Ex. bushes, grass or plants in the telephoto position.

● Objects in which the infrared beam is reflected too much



Ex. traffic signs, a white wall, mirror, or subject through plate glass.

● Objects which are not solid



Ex. fireworks, candle flame or smoke.

● Objects which are extremely small and do not cover more than 1/10 of the viewfinder's view

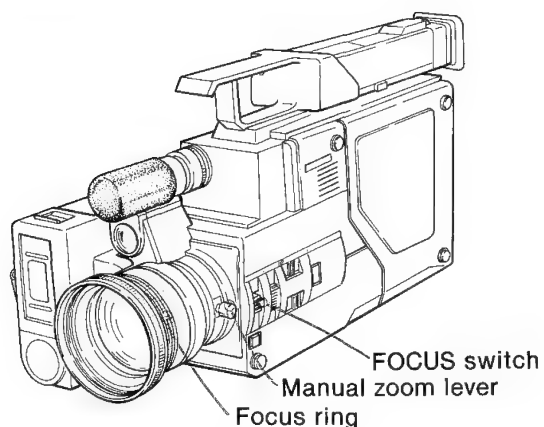


Ex. insects.

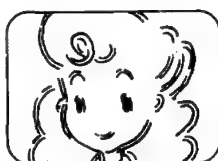
Notes

- Auto focusing works up to about 13 meters (43 feet). Adjust the focus manually for a subject more than 13 meters away.
- If conversion lenses or special effect filters are used, focus should be set manually.
- If the lens or the infrared beam detector are dirty, auto focusing does not function correctly. Wipe and clean with a soft cloth.
- When using the auto focus function, do not turn or stop the focus ring forcibly. Do not look into the infrared beam emitter for a long time.

MANUAL FOCUSING I-1



- 1 Set the FOCUS switch to MAN (MANUAL).
- 2 Turn the manual zoom lever to the telephoto position (72) to make the subject as large as possible in the viewfinder. I-2
- 3 Turn the focus ring to achieve sharp focus. I-3
- 4 Set the desired shot length using the manual zoom lever. I-4



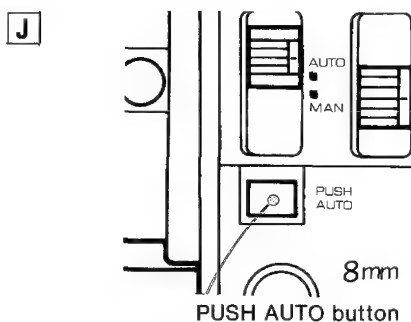
SOME HELPFUL HINTS

- Focusing with the lens in wide angle can lead to shots being out of focus. This is because the focusing field is wider than in telephoto, making it harder to achieve definite and sharp focus. Therefore, if the subject is focused in the lens' telephoto position, it will stay in perfect focus regardless of subsequent zooming operation. Focus needs to be reset only if the distance between the camera and the subject changes.
- When shooting a scene with lots of movement in bright light, the subject can be kept in good focus regardless of movement by setting the zoom lever to 12 and the focus ring to 2 m.

- The figures on the focus ring indicate the distance between the subject and the ϕ mark on the side of the movie body.
- When shooting in low light situations, such as indoors, the depth of field for proper focus becomes very shallow. For best results, set the focus in telephoto, and shoot at wide angles.
- If the focal length is less than 1.3 m (approx. 4 ft), remove the lens hood of this camera and attach a commercially available closeup camera lens instead.

QUICK FOCUS ADJUSTMENT J

For quick, automatic adjustment of focus while recording in the manual mode, simply press the PUSH AUTO button until the subject is correctly focused.



If you press the PUSH AUTO button before starting recording, you can get a well-focused picture from the beginning of the recording.

WHITE BALANCE

ABOUT WHITE BALANCE

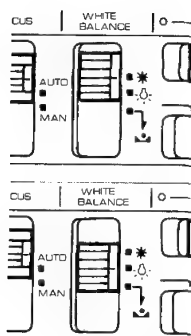
Adjustment of white balance is for colour compensation so that a white subject can be recorded white without reference to the colour of the light source.

After white balance has been adjusted, that setting will be maintained for approximately 3 hours after the power has been turned off.

HOW TO ADJUST WHITE BALANCE

White balance can be automatically set or manually set at two predetermined values—artificial and sunlight lighting. Be sure the aperture switch is set to the NORM position.

K



Automatic white balance adjustment

Set white balance referring to "RECORDING" on page 16.

When automatic white balance adjustment is impossible

The yellow lamp (low light lamp) in the viewfinder is on because of insufficient lighting.

In this case, the WHITE BALANCE switch does not function even if it is pushed down to . Try to increase the illumination.

When the subject is the light source, such as *night lights, fireworks, or other special light effects*

After the WHITE BALANCE switch is pushed down to , even if the white balance lamp blinks, the movie is set at its best condition. Recording can be done at such condition or for night lights or fireworks, recording can also be done with the white balance switch set to , and for a candle flame, with the switch set to . For other subjects, set to either position referring to the colour temperature chart of the "HINTS FOR BETTER SHOOTING" on page 50.

When to use preset white balance settings (and) K

If there's no time to set white balance before shooting, setting the white balance switch to one of the two preset positions will provide satisfactory result.

Recording outdoors—Set to .

Recording indoors—Set to .

When resetting white balance

As long as light conditions do not change, the white balance setting remains proper for shooting. However, if light conditions change, white balance should be reset for the best results.

When adjusting white balance outdoors, more accurate adjustment can be made by setting the white balance in accordance with the light conditions the subject will be taped under. For example, if the subject is going to be taped in sunlight, put the white lens cap on the lens hood and point the camera toward the sun. If the subject is going to be taped in shadows, white balance should also be adjusted in shadows.

ZOOMING

Either manual zoom or power zoom can be used. To make zooming more effective, shoot a still scene for a few seconds at the beginning and the end of zooming.

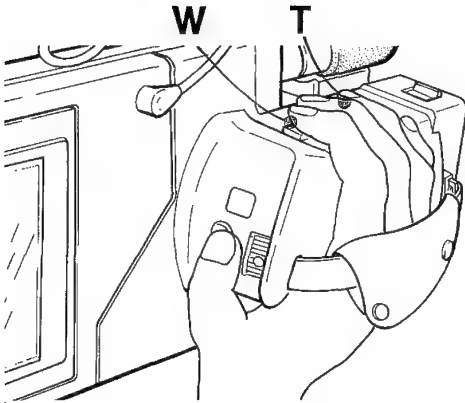
POWER ZOOM L-1

Press T for telephoto and W for wide-angle.

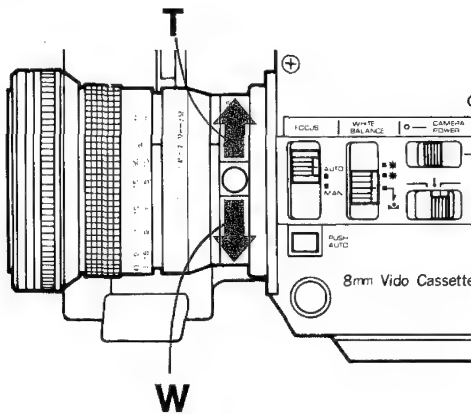
MANUAL ZOOM L-2

For special effects, when extra fast or very slow zooms are required, manual zooming should be used.

L-1



L-2



IRIS ADJUSTMENT

The iris is adjusted automatically with the aperture switch set to NORM. When shooting a scene with strong contrast such as the ones described as follows, adjust the aperture switch to BACK LIGHT or HIGH LIGHT.

- When a backlit shot results in the subject being too dark.....set to BACK LIGHT. M-1
- When a subject is too bright against a dark back ground.....set to HIGH LIGHT. M-2

Notes

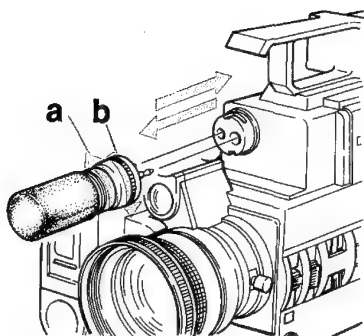
Be sure the picture in the viewfinder has the proper brightness, when the aperture switch has been set to BACK LIGHT or HIGH LIGHT. Wrong selection of the position results in a picture that is too bright or too dark.

M-1



M-2



N

USE OF THE MICROPHONE

USING THE SUPPLIED MICROPHONE

The supplied microphone is a uni-directional monaural type. The sharp directivity of this microphone allows the subject being taped to be simultaneously recorded with natural sound quality. For best results when using the supplied microphone, keep the following points in mind.

- When the scene is very quiet, camera operation noises (using the zoom lever, etc.) may be picked up.
- Sounds of subjects far from the camera will not be picked up.

USING A COMMERCIALLY AVAILABLE MICROPHONE

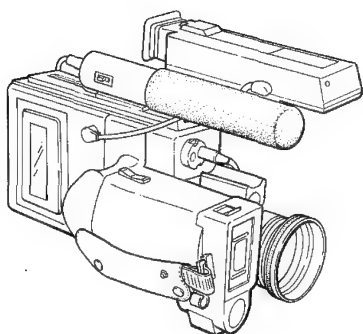
By using a commercially available microphone, audio recording efficiency and enjoyment can be increased, permitting effective recording of subjects which cannot be achieved using the supplied microphone. Select the type of the microphone to be used based on your requirements.

- To pick up sounds equally from all directions—omni-directional microphone
- To pick up specific sounds—uni-directional microphone
- To isolate a sound—supercardioid microphone
- To allow the field of recording to be changed—zoom microphone

When using an commercially available microphone, remove the supplied microphone.

To remove the supplied microphone **N**-a

To replace the supplied microphone **N**-b

O

Attachment of a commercially available microphone **O**

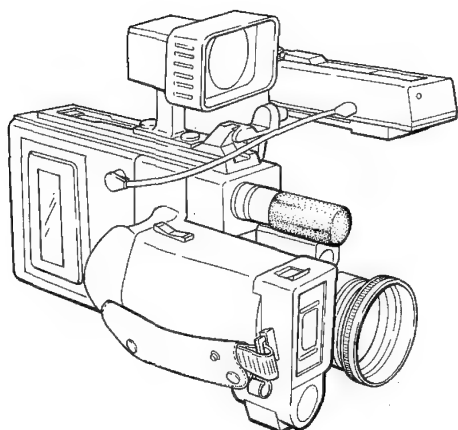
- 1 Attach the microphone to be used to the accessory shoe.
- 2 Connect the microphone cable to the MIC jack.

Note

Only the microphone specified for attachment to the camera's accessory shoe should be used.

Refer to the "SHOOTING ON YOUR SHOULDER" on page 14 for removing the viewfinder and handle.

P



ATTACHMENT OF THE VIDEO LIGHT P

Attach the video light to the accessory shoe.

Note

Only the video light specified for attachment to the camera's accessory shoe should be used.

Video light, commercially available microphone and handle are not attached to the camera's accessory shoe at the same time.

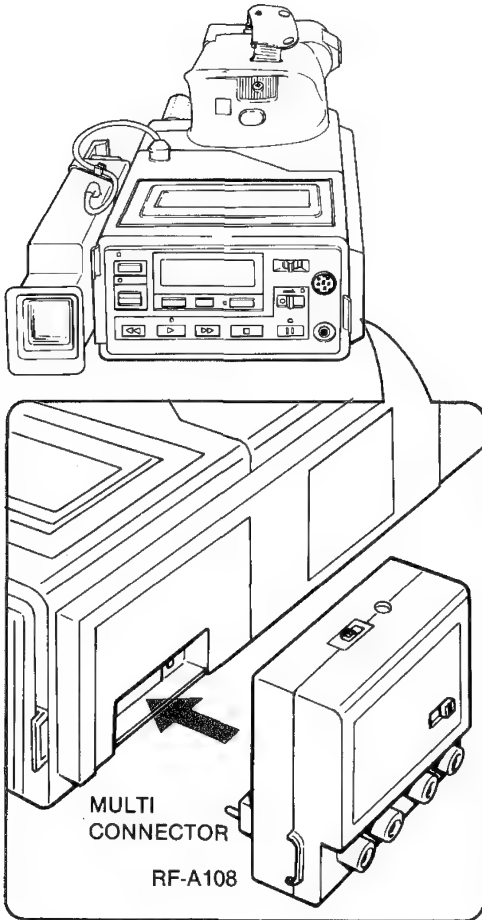
Refer to the "SHOOTING ON YOUR SHOULDER" on page 14 for removing the viewfinder and handle.

Consult on the "Precautions for using lights" on page 48 before using.

RECORDER OPERATION

PLAYBACK OF THE RECORDED TAPE

Q-1



The following connections are only for viewing tapes.

When you are away from home and still want to see the playback picture with an available TV, select one of the following ways.

With following connections, TV programmes can be viewed as usual.

If you also want to record a TV programme, see page 30.

CONNECTION

Before making connections, be sure to unplug the mains leads of all the equipments.

With the supplied AP-A108 ac pack and RF-A108 RFU adaptor **Q-1**

Connect the RFU adaptor to the MULTI CONNECTOR of the 8mm video cassette movie and insert the ac pack into the battery compartment.

Note

When connecting the RF-A108, gently align the guides and holes of the RFU adaptor with the pins and holes of the MULTI CONNECTOR of the movie. Do not jam the adaptor in as this will damage the pins of the MULTI CONNECTOR.

5 ←



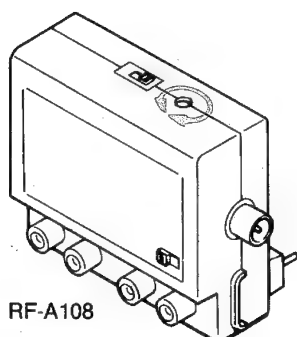
Q-2

- For viewing a playback picture, set to VTR.
For TV programme viewing, set to ANT.

One of the television programme positions must be adjusted to receive the signal from the 8mm video cassette movie.

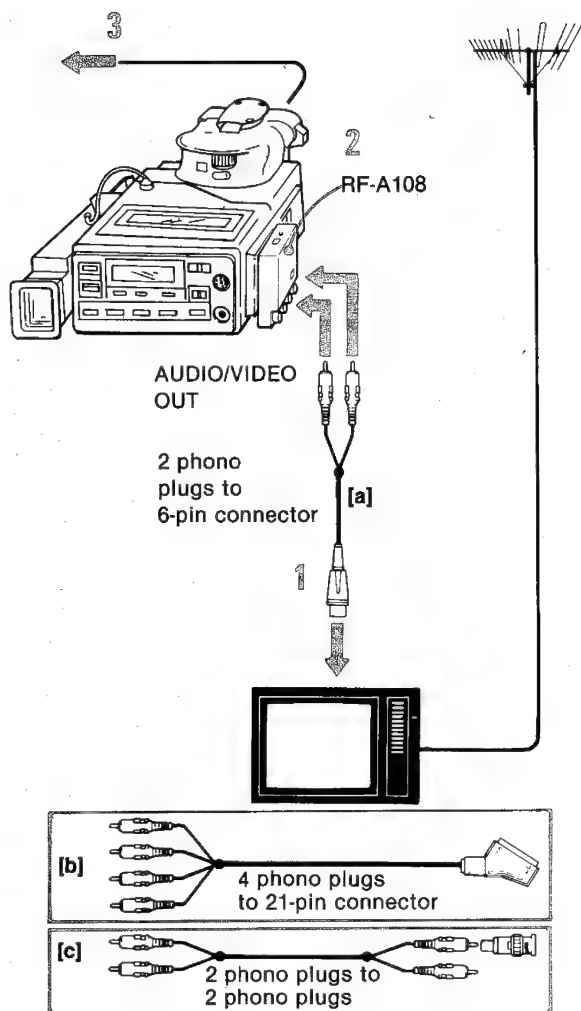
- If you are not sure how to adjust your TV, please refer to the TV's instruction manual or consult your dealer.

gramme position selected in this adjustment.

Q-3

If the playback picture is not free of disturbance

- 1 Set the selector switch of the ANS-33 to ANT.
 - 2 Adjust the programme position of the TV to a channel between UHF channels 30 and 39 with the tuning control or the fine tuning control on the TV, so that the TV screen shows no picture and so that a steady rustling sound or no sound is heard.
 - 3 Set the selector switch of the ANS-33 to VTR.
 - 4 Slowly turn the RF channel screw of the RF-A108 with the supplied screwdriver, until you see an undistorted picture of what is being shot. **Q-3**
- Now the TV adjustment is complete.

Q-4

Connecting a TV receiver/colour monitor which is equipped with the following connector(s) **Q-4**

6-pin DIN connector [a]

Leave the aerial cable connected to the aerial socket of the TV.

- 1 Connect the AUDIO/VIDEO OUT jacks of the RF-A108 to the 6-pin DIN connector of the TV with an audio video cable.
- 2 Set the RF/LINE selector of the RF-A108 to LINE.
- 3 Connect all the mains leads to mains outlets.

With this connection, you don't have to select the channel for the 8mm video cassette movie. Instead, set the TV/VIDEO select button of the TV to the proper setting.

For viewing a playback picture, set to the VIDEO mode.

For TV programme viewing, set to the TV mode.

When a colour TV tuner is not connected to a colour monitor, TV programmes can't be viewed.

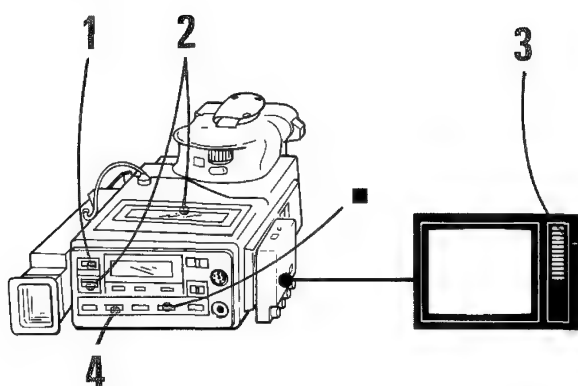
When a 21-pin connector (EUROCONNECTOR) is available on the TV [b]

Use an audio video cable in the figure [b] instead of the audio video cable in step 1.

When audio/video connectors are available on the TV [c]

Use an audio video cable in the figure [c] instead of the audio video cable in step 1.

Q-5



OPERATION **Q-5**

The viewfinder cable need not be connected.
1 Turn on the power of the equipment to be used.

2 Insert a cassette.

3 Turn on the TV or Component TV.

When a TV without audio/video input connectors is connected, select the program position which is adjusted for the 8mm video cassette movie.

When a TV with 6-pin DIN, 21-pin or audio/video connectors is connected, set the TV/VIDEO select button to the VIDEO mode.

4 Press the ► button of the 8mm video cassette movie.

The lamp lights and the playback starts.

To stop the playback, press the ■ button.

When the tape comes to an end, the unit automatically stops.

DIFFERENT FORMS OF PLAYBACK

To obtain a still picture

Press the ■■ button during playback.

Streaks will appear in the still picture. The sound will be muted. To resume normal playback, press the ■■ button again.

When the pause mode lasts for more than approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

Note

When a tape is recorded in the SP mode, a still picture may be noisy with many streaks and become black-and-white.

To view the picture at high speed

Keep pressing the ►► or ◀◀ button during playback. For high-speed playback picture in the forward direction, press the ►► button. For high-speed playback picture in the reverse direction, press the ◀◀ button.

Streaks will appear in the high-speed pictures. The sound will be muted.

Release the button for normal playback.

Note

When a tape is recorded in the SP mode, a high-speed picture may be played back sometimes in black-and-white and streaks will be wider than those of the LP recorded tape.

USE OF THE TAPE COUNTER

TO INDEX THE WHOLE TAPE

When the unit is turned on, the tape counter will appear in the display window. Press the RESET button at the beginning of the tape so that the counter shows "0000". By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.

Write the counter readings you want to remember on the label of the cassette.

TO RETURN TO A PRE-REGISTERED POINT

During recording or playback, press the RESET button at the point you later want to locate. The counter will be set at "0000".

- 1 Press the ■ button to stop the tape, when the recording or playback has finished.
- 2 Press the MEMORY button and the "MEMORY" mark will appear in the display window.
- 3 Press the ►► or ◄◄ button.
The tape will be sent forward or in reverse and stop automatically when the counter reaches "0000".

Notes

- While the "MEMORY" mark appears in the display window, the counter cannot be reset to "0000", therefore, press the MEMORY button to cancel the function and then press the RESET button.
- The counter reading and the point of the tape may not correspond exactly.

TV PROGRAMME RECORDING

The following connections make both TV programme viewing/recording and tape playing possible.

The viewfinder cable need not be connected.

PREPARATION

Before making connections, be sure to unplug the mains leads of all the equipments.

With the AP-A108 ac pack and RF-A108 RFU adaptor

Connect the RFU adaptor to the MULTI CONNECTOR of the 8mm video cassette movie and insert the ac pack into the battery holder. (See page 25.)

Connecting a TV without audio/video input connectors and a VCR without an input select switch R-1

CONNECTION

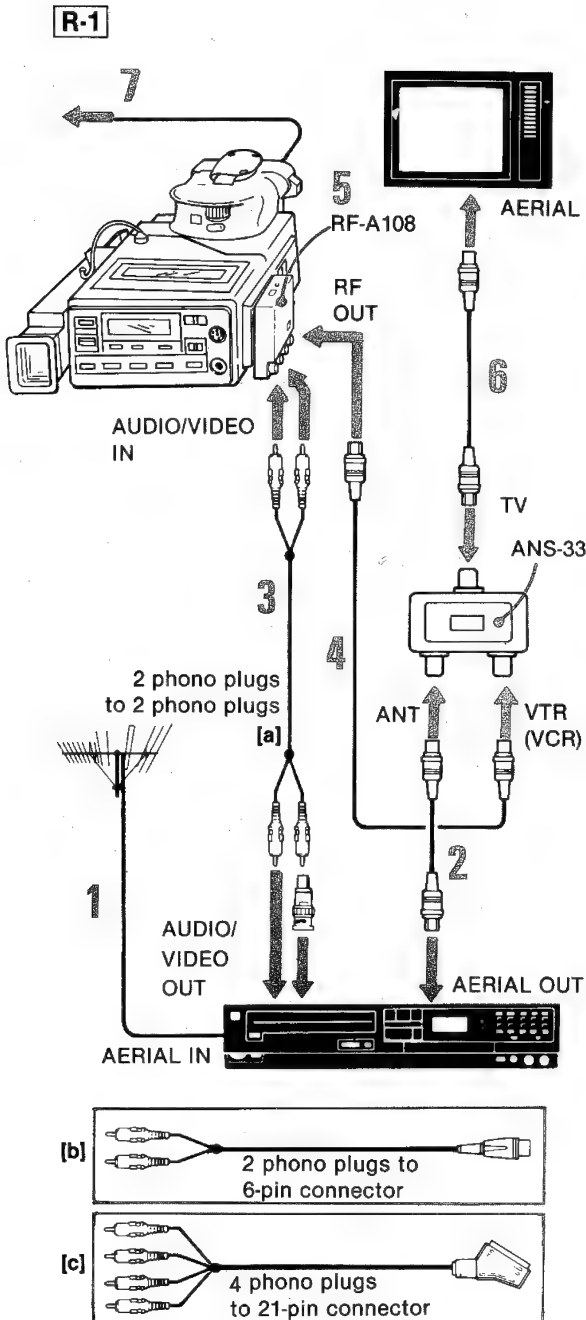
- 1 Connect the aerial cable to the aerial in socket of the VCR.
- 2 Connect the aerial out socket of the VCR to the ANT connector of the ANS-33 with the aerial cable supplied with the RF-A108.
- 3 Connect the audio/video output connectors of the VCR to the AUDIO/VIDEO IN jacks of the RF-A108 with the audio video cable [a].
- 4 Connect the VTR connector of the ANS-33 to the RF OUT connector of the RF-A108 with the aerial cable supplied with the RF-A108.
- 5 Set the RF/LINE selector of the RF-A108 to RF and the I/G selector to the proper position according to the TV system of your area.
- 6 Connect the TV connector of the ANS-33 to the aerial socket of the TV with an aerial cable.
- 7 Connect all the mains leads to mains outlets.

When a 6-pin DIN connector is available on the VCR [b]

Use an audio video cable in the figure [b] instead of the audio video cable in step 3.

When a 21-pin connector (EUROCONNECTOR) is available on the VCR [c]

Use an audio video cable in the figure [c] instead of the audio video cable in step 3.



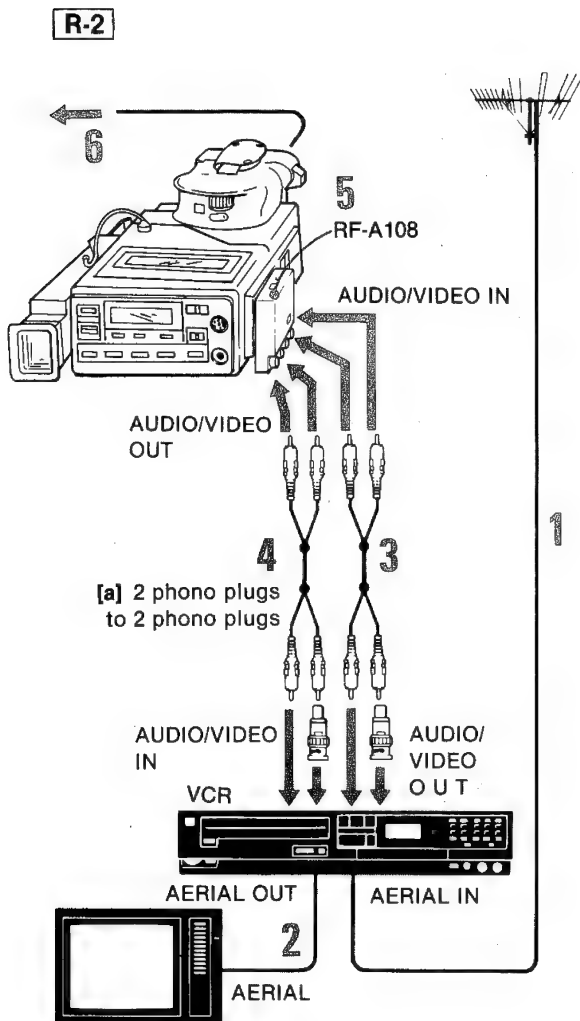
Recording

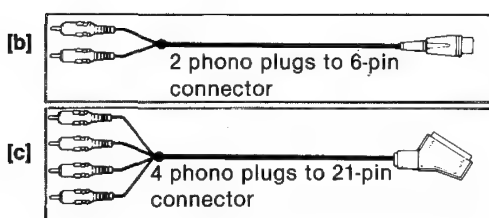
- ## Playback

- ### Recording one TV programme while viewing another

- ### Connecting a TV without audio/video input connectors and a VCR with an input select switch **R-2**

- 1 Connect the aerial cable to the aerial in socket of the VCR.
- 2 Connect the aerial out socket of the VCR to the aerial socket of the TV with the aerial cable supplied with the RF-A108.
- 3 Connect the audio/video output connectors of the VCR to the AUDIO/VIDEO IN jacks of the RF-A108 with the audio video cable.
- 4 Connect the AUDIO/VIDEO OUT jacks of RF-A108 to the audio/video input connectors of the VCR with an audio video cable [a].
- 5 Set the RF/LINE selector of the RF-A108 to LINE.
- 6 Connect all the mains leads to mains outlets.





When a 6-pin DIN connector is available on the VCR [b]

Use an audio video cable in the figure [b] instead of the audio video cable.

When a 21-pin connector (EUROCONNECTOR) is available on the VCR [c]

Use an audio video cable in the figure [c] instead of the audio video cable.

OPERATION

Recording

- 1 Turn on the power of the equipment to be used.
- 2 Insert the cassette into the 8mm video cassette movie.
- 3 Set the input select button of the VCR to TUNER.
- 4 Select the programme position to be recorded with the programme select button on the VCR and select the programme position for the VCR on the TV.
- 5 Start recording.

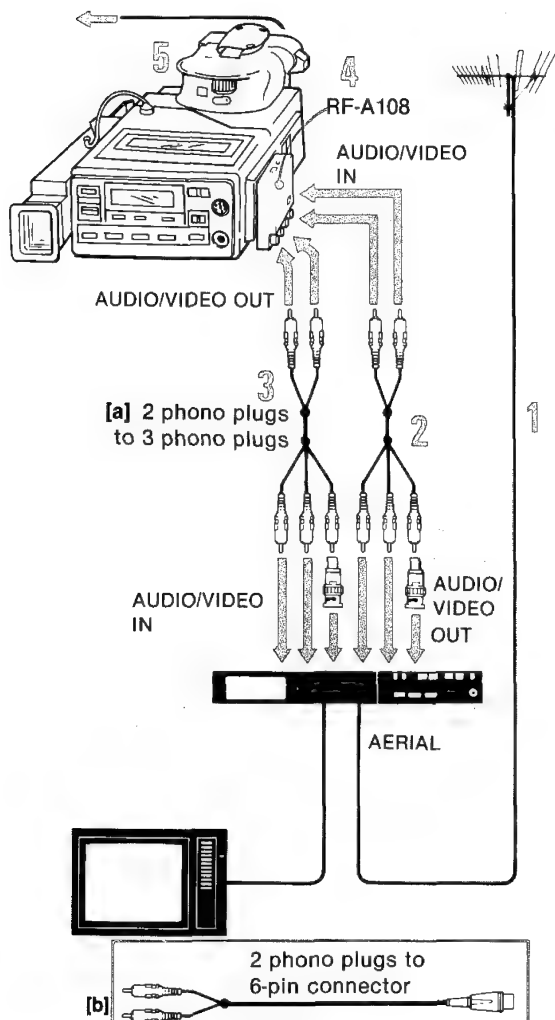
Playback

- 1 Disconnect the AUDIO/VIDEO IN jack on the RF-A108 and turn on the power of the equipment to be used.
- 2 Set the input select button of the VCR to LINE.
- 3 Select the programme position for the VCR on the TV.
- 4 Start playback.

Recording one TV programme while viewing another

Select the desired programme position on the TV.

When a stereo VCR is used, use an audio video cable for stereo at one side.

R-3

Connecting a TV with audio/video input connectors, or a colour monitor and a TV tuner **R-3**

CONNECTION

The colour monitor should be connected to the TV tuner first.

- 1 Connect the aerial cable to the aerial socket of the TV tuner.
- 2 Connect the audio/video output connectors of the TV or the TV tuner to the AUDIO/VIDEO IN jacks of RF-A108 with an audio video cable.
- 3 Connect the AUDIO/VIDEO OUT jacks of the RF-A108 to the audio/video input connectors of the TV or the TV tuner with an audio video cable [a].
- 4 Set the RF/LINE selector of the RF-A108 to LINE.
- 5 Connect all the mains leads to mains outlets.

When a 6-pin DIN connector is available on the TV tuner [b]

Use an audio video cable in the figure [b] instead of the audio video cable.

The optional VX-TU70 tuner timer unit can be connected directly to the MULTI CONNECTOR of this 8mm video cassette movie.

R-4

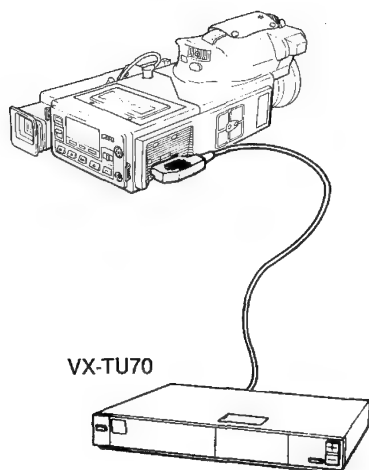
OPERATION

Recording

- 1 Turn on the power of the equipment to be used.
- 2 Insert the cassette into the 8mm video cassette movie.
- 3 Set the input select button of the TV or the TV tuner to TV, and select the programme position to be recorded.
- 4 Start recording.

Playback

- 1 Disconnect the AUDIO/VIDEO IN jack on the RF-A108 and turn on the power of the equipment.
- 2 Set the input select button of the TV or the TV tuner to VIDEO.
- 3 Insert the cassette into the 8mm video cassette movie and start playback.

R-4

TO STOP THE TAPE MOMENTARILY

Press the **||** button. The TV programme can be seen on the TV but the picture will not be recorded.

To resume recording, press the **||** button again.

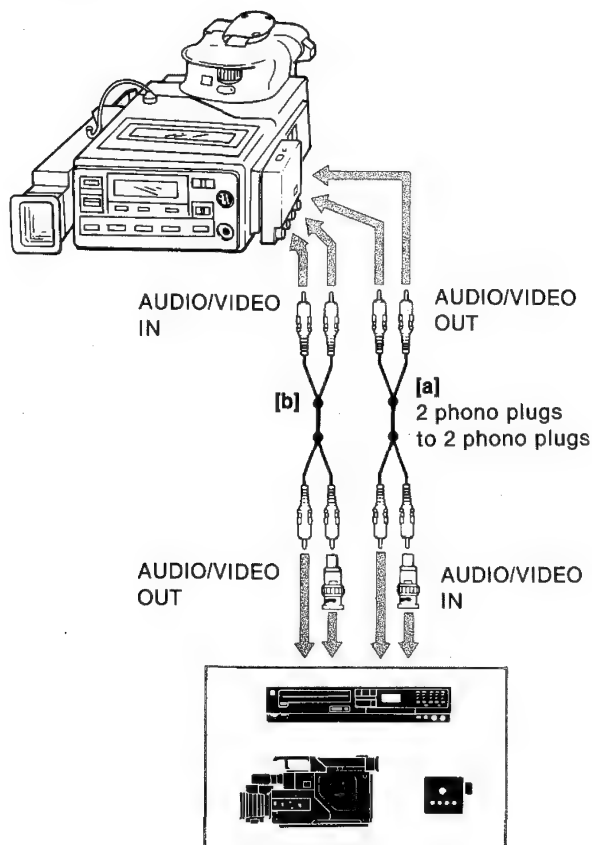
When the recording pause mode lasts for approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

With the above connections, TV programmes can be viewed as usual.

Notes

- When the unit is set in the VCR-CAMERA or the CAMERA mode, a TV programme cannot be recorded as the camera takes precedence. For TV programme recording, turn on the VCR power only.
- When the tape comes to the end, the "TAPE" mark will blink in the display window. When the tape has ended, the unit will be automatically set in the stop mode.

S



EDITING S

To edit a home movie tape you will need another video recorder or another 8mm video cassette movie.

Connect the RF-A108 RFU adaptor to the 8mm video cassette movie before making the other connections.

1 To transfer a recording from the VE-M800 to a tape on another VCR or 8mm video cassette movie, connect the AUDIO/VIDEO OUT jacks of the RF-A108 to the AUDIO/VIDEO IN jacks of the recorder, set the RF/LINE selector of the RF-A108 to LINE and set the REC MODE/EDIT switch to the right "EDIT" position. [a]

To transfer a recording from another VCR or 8mm video cassette movie to the tape on the VE-M800 8mm video cassette movie, connect the AUDIO/VIDEO IN jacks of the RF-A108 to the AUDIO/VIDEO OUT jacks of the recorder. [b]

2 Turn on the power of the equipment.

3 Start editing.

If you have set the REC MODE/EDIT switch to the "EDIT" position, be sure to return the switch to the left "NORM" position when you are through editing.

FUNCTION OF THE REC MODE/EDIT SWITCH

Set this switch to the "EDIT" position when recording the playback of this 8mm video cassette movie with another recorder. Signal loss that results from the tape-to-tape transfer will be reduced and the playback signals of this 8mm video cassette movie will be transferred more accurately. When using this 8mm video cassette movie for recording or for normal playback, keep this switch to the left "NORM" position.

INSERT RECORDING

You can insert (record) video and audio simultaneously from the camera, a TV or a VCR onto any recorded tape.

PREPARATION

Make the necessary connections. For details on each connection and operation, refer to the corresponding page.

To insert camera recording [P.16]

Set the 8mm video cassette movie in the VCR-CAMERA mode by pressing the VCR POWER and CAMERA POWER switches.

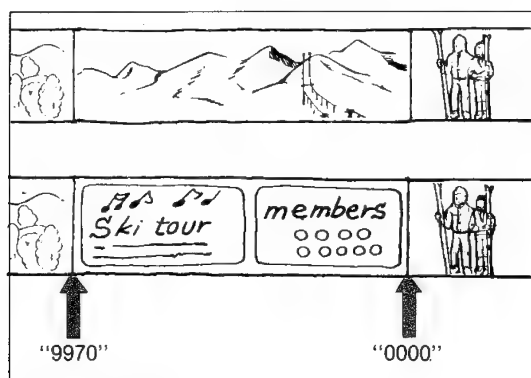
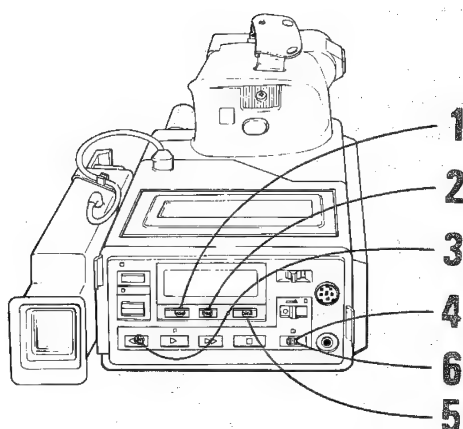
To insert a TV programme [P.30]

Make the necessary connections as described in TV programme recording.

To insert a recording from a VCR [P.35]

Make the necessary connections as described in editing.

T



OPERATION T

Monitor the playback picture of the recorded tape on the viewfinder screen and decide where the insertion should be made.

- 1 Find the position for the end of the insert and press the RESET button. The counter returns to "0000".
- 2 Press the MEMORY button. The "MEMORY" mark appears on the display window.
- 3 Rewind the tape back a little further than the point where the insert should begin (e.g. "9970") by pressing the ◀◀ button during playback.
- 4 Release the ◀◀ button and press the || button at the place the insert should begin. The unit is set in the playback pause mode.
- 5 Press the INSERT button. The unit is set in the insert pause mode. The ▶ lamp goes out and the INSERT and the || lamp will light.
- 6 Play the inserting source of the connected equipment and:
 - For camera recording, press the START/STOP or the || button.
 - For other recording, press the || button.
 The insert recording will start and the counter reading will increase. The insert recording stops at the counter reading "0000" and the INSERT lamp goes out.

Instead of deciding the point where the insert should end, as described in step 1, you may wish to continue the insertion and stop it at a suitable point while monitoring the inserted recording. In this case, start operating from step 3. Proceed with the remaining steps and stop the insertion by pressing the ■ button.

When the pause mode lasts for approximately 7 minutes, the pause mode will be automatically released and the unit will be set in the stop mode.

GENERAL

NOTES ON MOISTURE CONDENSATION

MOISTURE INSIDE THE RECORDER SECTION

If the unit is brought directly from a cold to a warm location, moisture may condense on the drum assembly inside the unit. In this condition, the tape may adhere to the head drum. Take the cassette away.

To prevent possible damage under these circumstances, the recorder section is furnished with a moisture sensor. If moisture is present, the ☹ mark will blink when the power is turned on and the function buttons except for the EJECT button will not work. When a cassette has been inserted, the ☹ mark and the EJECT lamp will blink and the tape will be automatically unloaded.

If the ☹ mark blinks, eject the cassette and proceed as required.

When a battery pack is used as the power source

Turn off the unit and let the unit sit with the cassette compartment open until the moisture evaporates and the ☹ mark goes out when the power is turned on. In case the ☹ mark does not go out in a few hours, use an ac pack as the power source.

When an ac pack is used as the power source

Leave the recorder section turned on, so that the heater built in the movie will activate to make the moisture evaporate.

When the moisture has completely evaporated, the ☹ mark will go out. Then operate the unit as usual.

Moisture on the tape

If a tape is brought directly from a cold to a warm location, moisture may condense on the surface of the tape. When the tape is inserted and a tape transport button (such as the ► button) is pressed, the EJECT lamp will blink and the function buttons except for the EJECT button will not work. In this case, the ☹ mark will not appear.

If the EJECT lamp blinks, eject the cassette and let the unit and the cassette sit until the moisture evaporates.

When to use

The unit can be used again if the EJECT lamp does not light when a cassette is inserted and a tape transport button is pressed.

Moisture condensation on the lens

Moisture may condense also on the lens when the movie is brought in from a cold place to an extremely warm place, causing the lens to become dim. If this occurs, turn off the power and leave the movie unused at least for an hour.

PRECAUTIONS

OPERATION

- Operate the unit on 6–8.5V dc.
- For ac operation, use the accessories recommended in this manual.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Do not hold the unit by the viewfinder. Hold the unit only from underneath or by the handle. Holding the unit by the viewfinder can damage the unit and cause malfunctions.
- Avoid rough handling or mechanical shock to the unit. Be particularly careful of the lens.
- Do not apply excessive force to the microphone.
- Do not let the sun shine directly into the eyecup of the viewfinder, because the plastic inside the viewfinder may be damaged.
- Avoid shooting the same object for a long period of time (for example, as a lookout camera), as this will damage the colour filter inside the camera.
- Remove and store video cassettes after recording or playback.
- Do not wrap up the unit and operate it because heat may build up internally.
- Avoid using and storing the movie in the following locations.
 - Locations susceptible to vibration.
 - Locations exposed to strong magnetic fields.
 - Locations near TV or radio transmitters where strong radio waves are generated.

CARE

- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
 - When the unit will not be used for a long period of time, periodically turn on the power, operate the camera section and recorder section and play back a tape for about three minutes.
 - Clean the lens with a soft brush to remove dust. If there are fingerprints on the lens, remove them with a soft cloth. Clean the movie body with a dry, soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.
- For protection, keep the lens cap on the lens when not using the camera.

USING YOUR MOVIE ABROAD

Each country has special TV colour broadcast and electricity systems. Before using your movie abroad, check the following points.

Differences in colour systems

If you prepare fully charged batteries, you can use your movie in any country. You can monitor the playback picture on the viewfinder screen. However, to monitor the playback picture on a TV, the TV must be based on the PAL system and equipped with video/audio input connectors.

PAL system countries

Australia, Austria, Belgium, China, Denmark, Great Britain, Holland, Hong Kong, Italy, Kuwait, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, West Germany, etc.

NTSC system countries

Bahama Islands, Canada, Central America, Japan, Korea, Mexico, Taiwan, the Philippines, U.S.A., etc.

SECAM system countries

Bulgaria, France, Hungary, Iran, Iraq, Luxembourg, Monaco, Poland, the Soviet Union, etc.

SPECIFICATIONS

System

Video recording system

Rotary two heads,
Helical scanning FM system

Audio recording system

Rotary head, FM system

Video signal PAL colour, CCIR standards

Usable cassette 8mm video format cassette

Tape speed SP: Approx. 20.051 mm/sec.

LP: Approx. 10.058 mm/sec.

Recording or playback time

SP: 90 min. (P5-90)

LP: 180 min. (P5-90)

Approx. 3 min.

Fast forward time

Image device

CCD (Charge Coupled Device)

Viewfinder

Electric viewfinder FU-M80
(1" black and white)

Lens

Combined 8 × power zoom lens

f = 12-72 mm, F1.4

Filter diameter: 52 mm

Auto focus system

Infrared auto-focus

Colour temperature

Preset values:  5,800°K

 3,200°K

Auto: From the light at a tungsten lamp to the light on a slightly overcast day.

Minimum illumination 22 lux (F1.4)

(2 footcandles)

Illumination range 22 lux-100,000 lux

(2-9,294 footcandles)

Recommended illumination

More than 300 lux

(28 footcandles)

Aperture correction Approx. ±1.5

Input and output connector

MULTI CONNECTOR 24-pin

Video input: 1 Vp-p, 75 ohms unbalanced, sync negative

Video output: 1 Vp-p, 75 ohms unbalanced, sync negative

Audio input: -6 dBs, input impedance more than 47 kilohms

Audio output: -6 dBs, output impedance less than 1 kilohms

Earphone jack

Minijack, 8-ohm impedance

Remote jack

5-pin connector

MIC jack

Minijack, -66 dBs, low impedance

General

Power requirements

MULTI connector 8.5 V

Battery holder 6 V/8.5 V

Power consumption

7.7W (camera recording)
including the viewfinder

Installation

Horizontally, vertically

Operating temperature

0°C to 40°C (32°F to 104°F)

Storage temperature

-20°C to +60°C (-4°F to +140°F)

Dimensions

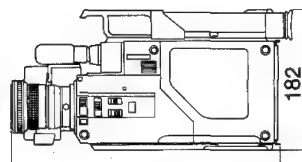
Approx. 126 × 182 × 350 mm

(w/h/d)

(5 × 7¹/₈ × 13⁷/₈ in.)



126



350

Weight

Approx. 2.3 kg (5 lb 1 oz)
excluding the battery and cassette

Approx. 2.63 kg (5 lb 13 oz)
including the battery and cassette

Microphone

Electret condenser microphone, uni-directional monaural type

Accessories supplied

Shoulder strap (1)
Camera head cover (1)
EVF adaptor (1)
cassette P5-30 (1)
ac pack AP-A108 (1)
RFU adaptor RF-A108 (1)
battery pack VX-A101 (1)
battery charge adaptor CG-A108 (1)

Optional accessories

Tuner timer unit VX-TU70, Battery pack VX-A101, carrying case VX-A109, system tray VX-A105

While the information given is true at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in the specifications. We would ask you to check with your appointed Pioneer dealer if clarification on any point is required.

Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information about the optional accessories available in your country.

Note

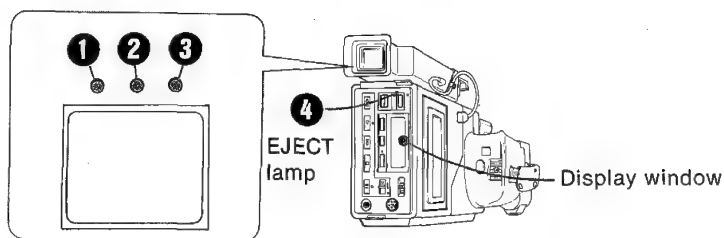
This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.

TROUBLESHOOTING

If you think you have a problem, double-check before calling the serviceman.
You may have overlooked something relatively simple!

Symptom	Cause	Procedure
Power is not supplied to the movie.	The tuner timer unit is connected.	Turn on the power of the tuner timer unit.
The START/STOP button does not operate.	The tape is affixed to the drum.	Remove the cassette with the EJECT button.
	The tape is at its end.	Rewind the tape or use a new one.
	The movie is set to the VCR mode.	Turn the CAMERA POWER on for VCR-CAMERA mode, or turn the VCR POWER off and turn the CAMERA POWER on for CAMERA mode.
Recording cannot be done even when the ● switch is slid to the right.	The tab on the cassette is out (red).	Use a new cassette or slide the tab in.
	The tape is at its end.	Rewind the tape or use a new one.
The power turns off.	While being operated in the CAMERA mode, the movie has been in the pause mode for more than 7 minutes.	Turn on the power again.
	The battery is exhausted.	Use a charged battery.
A vertical band appears when a subject such as lights or a candle flame is shot against a dark background.	The contrast between the subject and background is too high; the camera is not malfunctioning.	
The battery pack is quickly discharged.	The ambient temperature is too low.	
	The battery pack has not been charged fully.	Charge the battery pack again.
The autofocus function does not work.	The FOCUS switch is not set to AUTO.	Set the FOCUS switch to AUTO.
	Shooting conditions are not suitable for autofocus operation. (See page 19.)	Set the FOCUS switch to MAN and focus manually.
	Infrared beam emitter or detector is foggy or dirty.	Wait until the condensation evaporates or, if dirty, clean the emitter/detector.
The cassette cannot be removed from the compartment.	The battery is exhausted.	Use the charged battery.
	The power is turned off.	Be sure that the ac pack or the tuner timer unit is connected and turn on the power.
The playback picture is not clear.	The viewfinder lens is not adjusted.	Adjust the viewfinder lens.
	REC MODE/EDIT switch is set to the "EDIT" position.	Set the REC MODE/EDIT switch to the left "NORM" position.
	The recording was made out of focus.	
The picture is noisy.	The video heads may be contaminated.	Clean the heads using a cleaning cassette.
Playback cannot be done even when the ► button is pressed.	The tape is at its end.	Rewind the tape.

TROUBLE INDICATORS



◎ blinking fast, ○ blinking slow, ● lighting

*The lamps in the viewfinder light up only when the CAMERA POWER is turned on.

Display window					Cause	Procedure
1	2	3	4	Display window icons (Battery, Play, Tape)		
	○			○	The battery is exhausted.	Use a charged battery.
				○	Moisture has condensed on the drum assembly inside the unit. (The cassette does not remain in the cassette compartment.)	See page 37.
		◎		○	Moisture has condensed on the drum assembly inside the unit. (The cassette remains in the cassette compartment.)	
	○			○	During recording, the tape is near its end.	Use a new cassette.
				○	When the tape is near its end during recording, the movie enters in the recording pause mode.	
	◎		◎	◎	During recording, the tape is at its end.	
	◎		◎	◎	The tape which is at its end has been inserted when the movie is in the camera mode.	Rewind the tape or use a new one.
				○	The cassette has not been inserted yet when the movie is in the CAMERA mode.	Insert the cassette.
	◎		◎	○	The tab on the cassette is out when the movie is in the CAMERA mode.	Slide the tab in so that recording is done or use a new cassette.
●					Light is insufficient.	Increase the light.
		●			The WHITE BALANCE switch is set to ● or ☆.	Set the WHITE BALANCE switch according to the light source.
		◎			White balance is not proper.	Adjust white balance.
			◎		The tape is slack, the tape does not run normally, or moisture has condensed on the tape.	<ul style="list-style-type: none"> ● Take out the cassette and insert it again. ● Use a new tape. ● Let the tape dry and insert again.

HINTS FOR BETTER SHOOTING

The key to success—
practice makes perfect!

Record over and over using the same tape...
see what you've recorded on TV as soon as you're finished...
these are just two of the advantages of video recording.
The more you use your movie, the more professional you'll become.
In this section, we'd like to introduce some basic techniques to
help bring more enjoyment to your video recording.



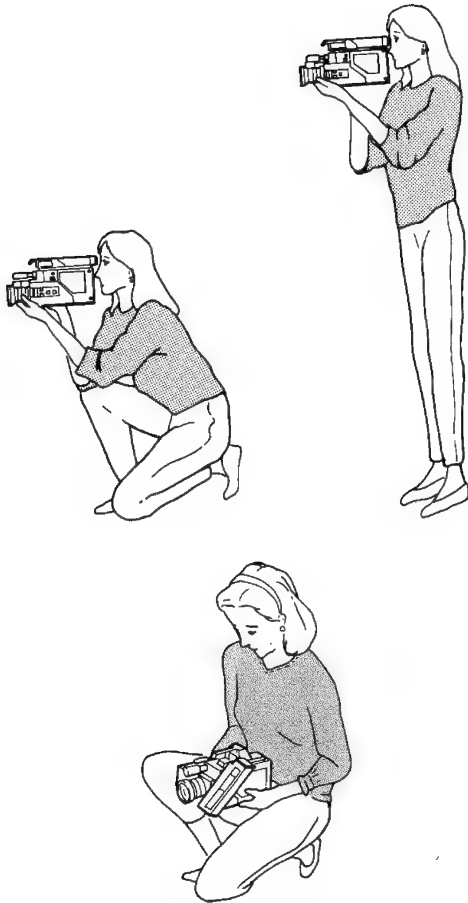
VE-M800

A

Getting stable pictures — starts with a correct stance

For hand-held shots, shooting position is the key.

Using three basic positions as a reference, practice shooting positions until you find the stance which provides the easiest shooting and best results. **A**



Basic shooting positions

- When kneeling, placing one knee on the ground provides the best stability.
- Place the eye firmly against the viewfinder eye cup.
- For hand-held shots, assume a comfortable, stable position. Make sure the unit does not move.
- Relax your shoulders.
- Put your right elbow firmly against your side to help stabilize the 8mm video cassette movie.
- If you are going to move the unit while recording, keep both eyes open as much as possible.
- Stand firmly with your feet comfortably apart.
Leaning against something firm such as a wall or tree will also provide extra stability.

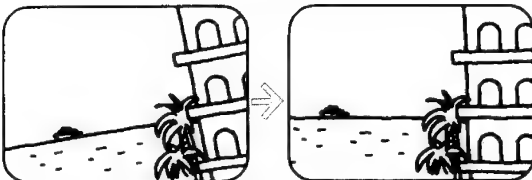
Use a tripod or monopod if possible

If you have a tripod for your still camera, it can also be used with the 8mm video cassette movie.

Use a sturdy one.

If a tripod is not available, try placing the camera on a tabletop, wall, or any other flat surface of suitable height.

B

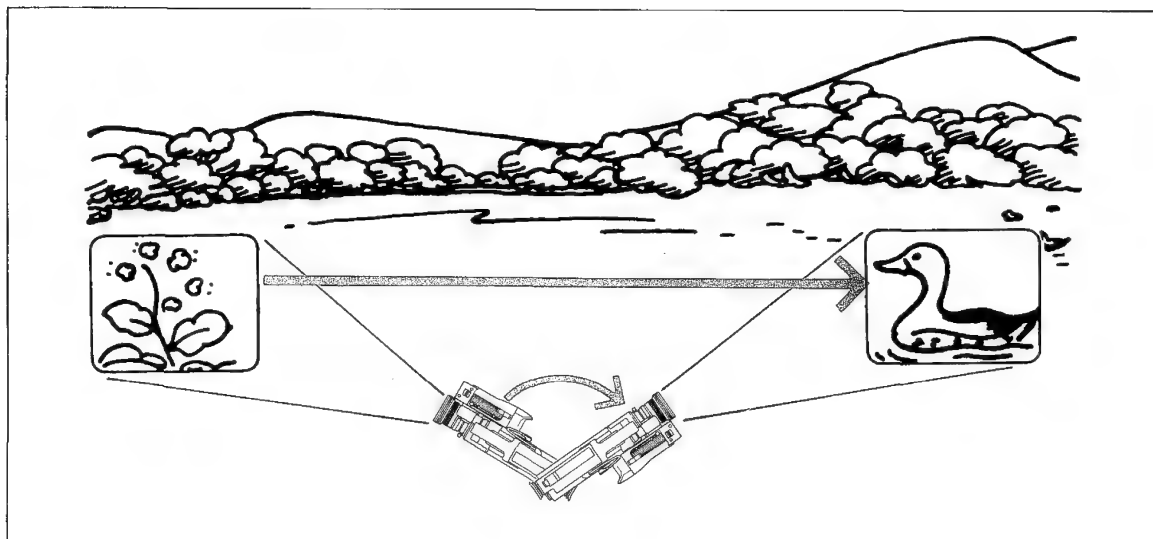


Keeping the horizontal plane level

Even if camera work is smooth and stable, shots can be tilted or off axis horizontally.

The horizontal plane can be easily determined by using the viewfinder frame as a reference. **B**

C



Three frequently used shots

These three types of shots will bring additional action and movement to your scenes when properly used.

For greatest effect, it is advisable that they not be overused.

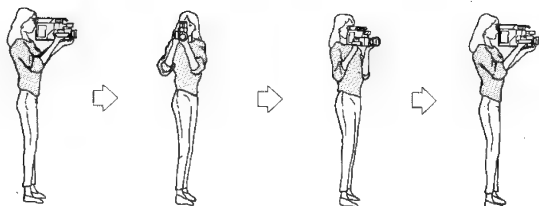
Panning—moving the camera horizontally

C

For emphasizing the grandeur of a scene, and for including all of the scenery in a single continuous shot.

- Hold the movie on the scene for a few seconds at the beginning and end of the pan.
- Pan slowly across the scene. (Stop at about 90°.)

D

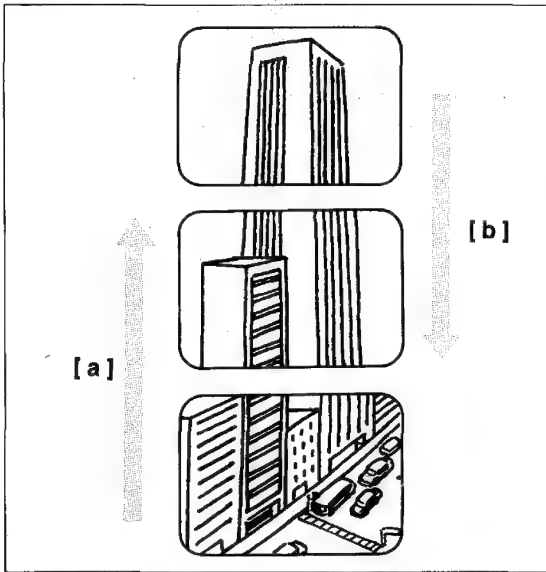


For professional-looking pans

D

- 1 First, stand so that you face in the direction where the pan will end.
- 2 Without moving your feet, rotate your upper body so that your movie faces the direction where the scene will begin.
- 3 Start shooting. Rotate your body slowly to the point where the pan will stop.

E



The best panning speed is one that will allow you to explain the scene during playback.

Repeated pans of the same scene should be avoided.

If you can hold your breath during panning and zooming, camera shake can be minimized, and you can concentrate more easily on the scene.

Tilting—moving the camera vertically **E**

To emphasize height....tilt up. [a]

To emphasize the final part of the scene...tilt down. [b]

Tilting shots with the 8mm video cassette movie should be slightly faster than pans.

Zooming—changing the size of the subject

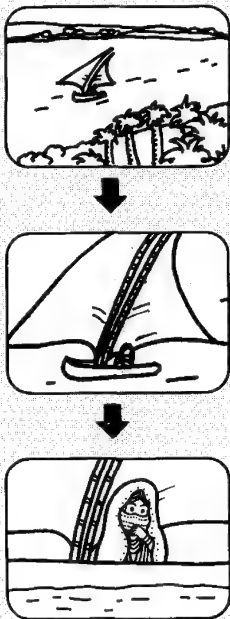
To draw attention to something specific

...zoom in. **F**

Because telephoto shots make camera shake more noticeable, the movie should be as stable as possible.

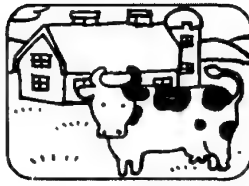
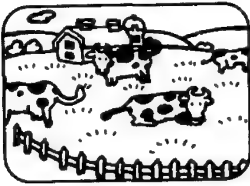
To end the shot by making the circumstances surrounding the scene understood...zoom out. **G**

F



G



H

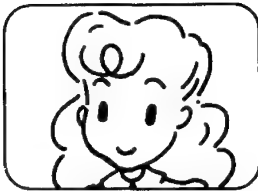
Sizing the scene

—mixing long, medium and close-up shots

Continuous use of long shots or close-ups will give your productions a monotonous “flat” impression. To avoid this, it is important to consider exactly what it is that you wish to “say” with every shot. Indeed, it is possible to change the impression that any subject makes merely by changing the way it’s shot.

H

You don’t have to change the subject to alter the scene—you can achieve a different effect by changing the size of the subject itself within the scene.

I**[a-1]****[a-2]****[b]****[c]****[d]****[e]**

Framing people

Basic shots for properly framing people are shown left. **I**

Experience has shown that shots that frame people differently than this do not have as pleasant an effect.

[a-1] Face shot

Even if you cut off the hairline, don’t cut off the chin.

[a-2] Face shot

When shooting a profile, leave the space in front of the face to create a “sight line.”

[b] Bust shot—Chest and above

[c] Waist shot—Upper hips and above

[d] Knee shot—Knees and above

[e] Full shot—Entire body

Scene length

—not too long, not too short

While there's no hard-and-fast rule, it is generally advisable to make each scene 6–7 seconds in length for easier viewing.

A succession of short scenes can tire the viewer, while long, single scenes can become boring.

Cutting according to the narration

Cut the scene when the narration is finished.

Cutting according to the subject

- Make long shots longer...and close-ups shorter.
Because long shots have more to see in them than close-ups, show them longer so the viewer may understand what's there.
- Make interesting shots and shots in which the subject is constantly moving longer.
- Make static shots shorter

Shoot as if you were watching the playback. That is, it's helpful to occasionally imagine your commentary of the scene even as you're shooting it!

LIGHTING FOR INDOOR SHOOTING

Lighting—For the sharpest pictures, you need the best light

For the most brilliant colour in your scenes, a sufficient light level must be maintained. If shooting is done indoors or under other circumstances where light is insufficient, lights must be used for best results.

What kind of light is best? Choosing the right lights

Photography lamps or halogen lamps are recommended. If you connect it directly to the camera, use a light that is low weight and low heat output level.

For lighting of a wide area for easy use—
reflector flood light

To emphasize the subject—
use a reflector spotlight.

Lighting the subject

The number of lights and their angle to the subject can make a significant difference in lighting effectiveness.

With a single light:

Locate it above and to one side of the subject. With just one light, contrast is unavoidably enhanced.

To eliminate shadows, another light should be added.

With two lights:

Locate one light above and to one side of the subject, and the second to the side of the subject in such a position that the shadows are eliminated.

If contrast is too strong when lights are used, point a light at the ceiling or reflect it off a sheet of white paper to add soft fill-in light.

Precautions for using lights

- Do not point the light at the movie body. Instead, make sure that it is pointed parallel to the camera or away from it. Be especially careful with lights attached to the accessory shoe. The high heat from the lights pointed at the camera body can warp the cabinet.
- Lights weighing over 500 g (1 lb.), or floodlights (lights with wide dispersion) must not be attached to the accessory shoe, as the heat from the light will warp the cabinet. Use of a special light stand is recommended.
- Lights become extremely hot during use—do not touch them!
- Do not mix different types of light, as light colour temperatures vary and can cause the subject's colour to be recorded incorrectly.

For detailed instructions on proper use of lights, carefully read the instruction manuals that accompany them.

FOR MORE EFFECTIVE PRODUCTION

In video, organization is the key

To make a first-class production, it is important to decide the contents and shooting sequence in advance. The first step is to sketch out a simple outline of the actual production based on the time-tested “five W’s of journalism” (who, what, where, when, why, how). This will allow you to efficiently and effectively record the many exciting events that happen around you, such as sports matches, graduations, birthday parties, picnics, camping trips, and other special events.

Write a script of what you want to record

After the theme has been decided, think about the progression of the scenes and write down the major points of the “story flow” on paper. This is called a scenario. When writing the script, it is helpful to scout the location where shooting will take place, and, in the event of school activities or weddings, to obtain a copy of the programme in advance, if possible. This will allow you to complete actual recording with a minimum of bother.

Typical scenario

The following items show the points to be mentioned and some notes for making a scenario.

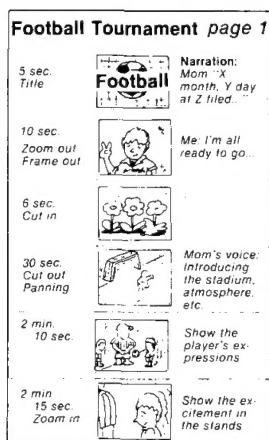
- Sound, camera work indications
- SE (Sound Effect)—Background music and sound effects
- Recording time
- Frame out—indicates spot where the scene will change
- Camerawork
- If possible, draw simple outline sketches in a TV frame
- Even regular paper can be used
- Write in the scene progression and narration
- Inserting a cut to highlight the season can often be effective

Making titles

Inserting titles to introduce your programmes can do much to enhance interest.

* Make the title boards called for in the script before shooting.

Title boards are art paper on which titles, pictures, etc., are drawn to be shot as part of the programme.



UNDERSTANDING LIGHT AND COLOUR

Brightness levels

The single greatest influence on picture quality is the brightness level. Using the following chart as a reference, take a few minutes to familiarize yourself with brightness levels to improve your recording.





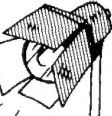


When to use an ND filter

Exceptionally bright scenes such as sunny days at the beach in summer or on snow fields in winter will look "washed out" when recorded. To make these scenes recorded naturally, an ND filter is required. (Refer to the chart) Three types are available—ND2, ND4, ND8—which reduce the exposure level to 1/2, 1/4, and 1/8, respectively. Select filters to match the lens diameter of 52 mm.

ND filter required	Unit: lux	
	100,000	Snow-covered mountains Snow fields Sandy beach, clear day in summer
Normal recording	10,000	Clear day, mid-day(100,000) Clear day, mid-afternoon (35,000) Overcast day, mid-day (32,000)
	1,000	Overcast day, one hour after sunrise (2,000) Office lit by fluorescent lamps, near window (1,000) Clear day, one hour before sunset (1,000)
	500	Department store counter (500~700) Station wicket (650) Office lit by fluorescent lamps (400~500) Room lit by two 30 W fluorescent lamps (300) Subway station platform (300)
	300	
Video light recommended	100	Arcade at night (150~200)
Video light required		
	10	Theater lobby (15~35) Candle light (10~15)

Colour temperature—how it effects white balance adjustment

If the temperature of an object continues to increase, it will eventually begin giving off light. At this time, there is a fixed relationship between the object's temperature and its "light colour." The temperature of the object radiating the light is expressed in absolute temperature (°K). This is also known as the colour temperature, which in turn stands for "light colour." As colour temperature increases, the light colour changes from red to yellow to white to blue.

Natural light colour temperature (°K)	Colour change	Artificial light colour temperature(°K)
Clear sky Slightly overcast 	10,000(°K) ↑ 10,000(°K)	
Cloudy, rainy 	8,000 ↑ 8,000	
	7,000 Blue 7,000	
	6,000 ↑ 6,000	
Direct sunlight 	5,000 ↑ 5,000	Fluorescent lamp (clear) 
2 hr.	4,000 White 4,000	Fluorescent lamp (white)
1 hr.	3,500 ↑ 3,500	Fluorescent lamp (off white) Studio lamp Halogen lamp 
40 min.	3,200 ↑ 3,200	
	3,000 ↑ 3,000	
	Yellow	
30 min.	2,500 ↑ 2,500	Tungsten lamp 
20 min.	2,000 ↑ 2,000	
Sunrise/sunset	Red	Candle light 

CHECK LIST BEFORE RECORDING

To make sure you don't miss those "once in a lifetime" scenes, go over the following check list and make the necessary preparations.

Required for recording

- | | |
|----------------------|---|
| VE-M800 | Is the shoulder strap attached? |
| Battery pack VX-A101 | Is it charged?
Are there enough battery packs to cover the planned recording time? |
| Cassette tapes | Have you prepared enough tapes to cover the planned recording time? |

Convenient accessories

- | | |
|--------------------------------|--|
| Tripod | Required for scenes in which stability of the camera is important. Tripod mount screw must match the receptacle mount. |
| AC pack AP-A108 | Used to operate the 8mm video cassette movie on house current and to charge batteries with the CG-A108 battery charge adaptor. |
| Battery charge adaptor CG-A108 | Used to charge battery packs. |
| RFU adaptor RF-A108 | Adaptor with video and audio input and output terminals for easy connection to monitors, other video recorders, etc., for recording and playback |

External spot microphone

Back electret condenser microphone which records the specific sound source being aimed at. Suitable battery must be used in the microphone.

Video light

Required for recording in low light situations.

Earphone (miniplug)

Permits monitoring of audio signal during recording.

The following units are packed with the VE-M800 8mm video cassette movie.

Battery pack VX-A101, AC pack/battery charger AP-A108, Battery charge adaptor CG-A108, RFU adaptor RF-A108, Cassette tape P5-30

For details on these units, please read their instruction manuals.